UNIVERSITY OF LEICESTER

Programme Specification (Postgraduate)

FOR ENTRY YEAR: 2023/24

Date created: 16/4/2022 **Last amended:** 15/11/2023 **Version no.** 2 **Date approved by EQED:**
Click or tap here to enter text.

1. Programme title(s) and code(s):

MBiolSci Biological Sciences

MBiolSci Biological Sciences (Biochemistry)*

MBiolSci Biological Sciences (Genetics)

MBiolSci Biological Sciences (Microbiology)

MBiolSci Biological Sciences (Physiology with Pharmacology)

MBiolSci Biological Sciences (Neuroscience)

MBiolSci Medical Biosciences (Biochemistry)

MBiolSci Medical Biosciences (Genetics)

MBiolSci Medical Biosciences (Physiology)

MBiolSci Medical Biosciences (Microbiology)

The MBiolSci programmes are available with or without an optional Year in Industry or Year Abroad

Exit Awards are available (which cannot be applied for) as follows:

HECert Biological Sciences

HEDip Biological Sciences

BSc Biological Sciences*

BSc Biological Sciences (Biochemistry)*

BSc Biological Sciences (Genetics)*

BSc Biological Sciences (Microbiology)*

BSc Biological Sciences (Physiology with Pharmacology)*

BSc Biological Sciences (Neuroscience)*

BSc Medical Biochemistry*

BSc Medical Genetics*

BSc Medical Physiology*

BSc Medical Microbiology*

Notes

* An award marked with an asterisk is only available as an exit award and is not available for students to register onto. Exit awards are available with or without an optional Year in Industry or Year Abroad

a) HECOS Code

HECOS Code	%
100948	100%

2. **Awarding body or institution:** University of Leicester

3. a) Mode of study Full-time

b) Type of study Campus-based

4. Registration periods:

The normal period of registration for the MBiolSci is four years (five years for degrees 'with a year in industry/abroad')

The maximum period of registration for the MBiolSci is six years (seven years for degrees 'with a year in industry/abroad')

5. Typical entry requirements

A-levels: typical offer AAB/ABB, normally including at least two relevant science subjects from Biology, Chemistry, Physics or Maths. We may consider two AS-levels in place of one A2-level. General Studies not accepted.

EPQ with A-levels: typical offer BBB + EPQ at grade B. A-level subjects to include two relevant science subjects from Biology (preferred), Chemistry, Physics or Maths. General Studies not accepted.

GCSE: At least Grade C/4 in both English Language and Maths (if not held at A-level)

Access to HE Diploma: Pass Science diploma with 45 credits at level three, 30 of which must be at distinction.

International Baccalaureate: Pass Diploma with 32/30 points, with a minimum of 17/16 points at HL to include grade 6 and 5 in at least two relevant science subjects from Biology, Chemistry, Physics or Maths. Minimum of 3 in HL Maths or 4 in SL Mathematics, or 5 in Maths Studies required if grade C/4 not held at GCSE. Minimum of 4 in English Language required if grade C/4 not held at GCSE

BTEC Nationals: Pass Applied Science Diploma with DDD plus five GCSEs at B/5 or above including two relevant sciences. Please contact Admissions before applying.

English Language Requirements

IELTS 6.5 or equivalent. If an applicant's first language is not English, they may need to provide evidence of their English language ability. If they do not yet meet our requirements, the English Language Teaching Unit (ELTU) offers a range of courses to help applicants to improve their English to the necessary standard.

The aims, learning outcomes and application criteria for the GCSA Year Abroad are available online.

6. Accreditation of Prior Learning

Direct 2nd year entry is considered subject to completion of a level 4 programme of comparable content to those studies in year 1 of this programme, passing all modules and with a year mark of at least 65%.

7. Programme aims

The programme aims to

At levels 4, 5 and 6:

- provide a flexible teaching and learning programme of high quality that is informed by an active research environment in which students develop their own interests
- provide a stimulating and supportive working environment
- provide an education that will enable graduates to follow a variety of careers including higher degrees and research

- have a broad appreciation of biological sciences or of biomedical and related disciplines with an emphasis on human health and disease, and advanced knowledge of one or more areas including appreciation of aspects of the underpinning research;
- develop a range of subject-specific skills including practical and transferable skills aligned to the Transferable Skills Framework: Interpersonal Skills; Skills associated with Exploration and Implementation and Self-Management Skills;

In addition to the above, at level 7:

- Provide instruction in current concepts and techniques of a specialised area of Biological Sciences as applied in modern research.
- Offer practical instruction in experimental techniques and use of common laboratory equipment.
- Give students direct experience of laboratory-based research during a long- research placement
- Provide a framework to develop skills to plan research and devise strategies to achieve specific research goals.
- Prepare graduates for employment in molecular, biomedical or biotechnological research and related industries, or for entry to PhD programmes.

In addition, for the "with a Year in Industry" variants:

- To provide students with an experience of the application of Biological and/or Biomedical professional skills in an industrial environment and to reinforce knowledge through its use in different environments.
- To gain an appreciation of the full range of skills required by Biological and Biomedical Scientists in industry.

In addition, for the "with a Year Abroad" variants:

- To provide experience of study of Biological or Medical Biosciences at an overseas University, to reinforce knowledge through use in different environments and when studying abroad develop communication skills in a foreign language.

8. Reference points used to inform the programme specification

- QAA Benchmarking Statement
- Framework for Higher Education Qualifications (FHEQ)
- UK Quality Code for Higher Education
- University Education Strategy
- University Assessment Strategy
- University of Leicester Periodic Developmental Review Report
- External Examiners' reports (annual)
- United Nations Education for Sustainable Development Goals
- Student Destinations Data

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9. Programme Outcomes

Unless otherwise stated, programme outcomes apply to all awards specified in 1. Programme title(s).

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
(a) Discipline specific knowledge and competencies		
(i) Mastery of an appropriate body of knowledge		
Demonstrate an awareness of main principles of biological sciences, Medical Biosciences and related disciplines and explain core concepts of their chosen discipline. Describe current areas of advance in their chosen specialisation(s). **In addition:** Demonstrate high-level knowledge of a research topic **(MBiolSci only)**	Lectures, tutorials, seminars, practical classes, computer classes, discussions, fieldwork, research projects, group work, directed reading, resource-based learning, and private study. **In addition:** Independent research **(MBiolSci only)**	Examination, coursework (e.g. practical reports, written reports, Essay, data analysis, field reports, oral presentations, group reports, video production, poster production, level 6 dissertation) **In addition:** Individual research project and level 7 dissertation. **(MBiolSci only)**

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
(ii) Understanding and application of key concepts and techniques		
Describe and apply safely appropriate experimental procedures in biological sciences, Medical Biosciences and related disciplines. Apply a scientific approach to the solution of problems in the context of their chosen specializations and appreciate the rationale of experimental design. Explain core concepts of their chosen discipline. **In addition:** Demonstrate Understanding of advanced concepts of their chosen discipline. Practical demonstration of experimental method. Competent use of standard and specialized equipment. Ability to interrogate publication databases and biological data resources. Manipulate simple biological data. **(MBiolSci only)**	Lectures, tutorials, seminars, practical classes, computer classes, discussions, fieldwork, research projects, group work, directed reading, resource-based learning, and private study.	Examination and coursework **In addition:** Experimental analyses. Contributions to discussions (formative). Individual research project. Project report. **(MBiolSci only)**
(iii) Critical analysis of key issues		
Demonstrate a capacity for critical scientific analysis of issues in the context of biological sciences, Medical Biosciences and related disciplines. **In addition:** Critic ally appraise data and results and critically review literature. **(MBiolSci only)**	Lectures, tutorials, seminars, practical classes, computer classes, discussions, fieldwork, research projects, group work, directed reading, resource-based learning, and private study. **In addition:** Laboratory classes, laboratory research project supervision and appraisals. Independent research. **(MBiolSci only)**	Examination and coursework **In addition:** Experimental analyses. Contributions to discussions. Project appraisals (formative). Project report. Individual research project. **(MBiolSci only)**

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
(iv) Clear and concise presentation of material		
Communicate orally and in writing concepts and arguments in biological Sciences, Medical Biosciences and related disciplines. **In addition:** Present scientific results. Participate in scientific discussion. **(MBiolSci only)**	Lectures, tutorials, seminars, practical classes, computer classes, discussions, fieldwork, research projects, group work, directed reading, resource-based learning, and private study. **In addition:** Laboratory classes. Research project supervision. Research project laboratory meetings. **(MBiolSci only)**	Examination and coursework **In addition:** Contributions to discussions. Laboratory presentations, Project presentations (formative and assessed). **(MBiolSci only)**
(v) Critical appraisal of evidence with appropriate insight		
Demonstrate the capacity to analyse and criticise evidence from both experimental procedures and the literature. **In addition:** Demonstrate awareness of the experimental method and project design **(MBiolSci only)**	Lectures, tutorials, seminars, practical classes, computer classes, discussions, fieldwork, research projects, group work, directed reading, resource-based learning, and private study. **In addition:** Laboratory classes. Lectures. Research project supervision. Tutorials. **(MBiolSci only)**	Examination and coursework **In addition:** Experimental analyses. Individual research project and dissertation. **(MBiolSci only)**
(vi) Other discipline specific competencies		
In the year in industry/abroad programmes, demonstrate the capacity to work in an industrial or other research laboratory or study in another European, American or Japanese University.	Laboratory work, research project	Research report, practical reports.

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
(b) Transferable skills		
Oral communication		
Communicate orally, with clarity and coherence, concepts and arguments in biological sciences, Medical Biosciences and related disciplines. **In addition:** deliver effective oral presentations. **(MBiolSci only)**	Tutorials, seminars, practical classes, computer classes, discussions, fieldwork, research projects, group work.	Oral presentations, group reports, tutorials. **In addition:** Individual research project . Project appraisals (formative). Project report. Research seminar. **(MBiolSci only).**
Research skills		
Should be able to problem solve, analyse data and interpret simple statistical tests. Should maintain useful research notes/records. **(MBiolSci only)**	Laboratory and computer classes. Individual research project. Project supervision **(MBiolSci only).**	Performance in laboratory and computer classes (formative). Laboratory notebook. Experimental analyses. Examinations: problem-based. Individual research project **(MBiolSci only).**
Communication Skills		
Communicate in writing, with clarity and coherence, concepts and arguments in biological sciences, Medical Biosciences and related disciplines. **In addition:** Write effective scientific reports **(MBiolSci only)**	Tutorials, seminars, practical classes, computer classes, discussions, fieldwork, research projects, group work. **In addition:** Study skills support. Project supervision. Individual research project **(MBiolSci only).**	Examination and coursework **In addition:** Individual research project. Project appraisals (formative). Project report. Research seminar. **(All MBiolSci)**

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
Information technology		
Demonstrate the effective use of IT for accessing databases and scientific literature; manipulating, processing and presenting data; presenting written assignments. **In addition:** Ability to interrogate publication databases and use bibliographic software. Identify, retrieve and manipulate simple biological data. Demonstrate mastery of word processing and presentation software. **(MBiolSci only)**	Lectures, tutorials, seminars, practical classes, computer classes, discussions, fieldwork, research projects, group work, directed reading, resource-based learning, and private study. **In addition:** Laboratory and computer classes. Study skills support. **(MBiolSci only)**	Examination and coursework **In addition:** Experimental analyses. Essay. Seminar presentation. Project report **(MBiolSci only)**
(iv) Numeracy		
Understand and manipulate numerical data, solve problems using a variety of methods and apply numerical and statistical techniques to data analysis.	Lectures, tutorials, seminars, practical classes, computer classes, discussions, fieldwork, research projects, group work, directed reading, resource-based learning, and private study.	Examination and coursework
(v) Team working		
Demonstrate the ability to work as part of a group **In addition:** Display project management and organizational skillsEffective interaction with supervisor. **(MBiolSci only)**	Tutorials, group work, research projects. **In addition:** Individual research project Project supervision **(MBiolSci only)**	Group reports, use of class data to generate practical reports **In addition:** Assessment of project Formative feedback in laboratory classes. **(MBiolSci only).**

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
(vi) Problem solving		
Apply a scientific approach to the solution of problems in the context of their chosen specialisations and appreciate the rationale of experimental design.	Lectures, tutorials, seminars, practical classes, computer classes, discussions, fieldwork, research projects, group work, directed reading, resource-based learning, and private study. **In addition:** Individual research project Project supervision **(MBiolSci only)**	Examination and coursework **In addition:** Assessment of project Formative feedback in laboratory classes. **(MBiolSci only).**
(vii) Information handling		
Demonstrate the capacity to access a variety of resource materials and to analyse evidence from both experimental procedures and the literature.	Lectures, tutorials, seminars, practical classes, computer classes, discussions, fieldwork, research projects, group work, directed reading, resource-based learning, and private study.	Examination and coursework
(viii) Skills for lifelong learning		
Demonstrate the acquisition of the skills and attributes necessary for lifelong learning, including: intellectual independence, effective time management, the ability to work as part of a team, the use of IT and the capacity to access and utilise a variety of resource materials. **In addition:** Should be able to apply study skills and manage information. Develop specialization and manage project **(MBiolSci only).**	Lectures, tutorials, seminars, practical classes, computer classes, discussions, fieldwork, research projects, group work, directed reading, resource-based learning, private study, career development programme. **In addition:** Library and IT skills, study skills support. Individual research project **(MBiolSci only).**	Examination, coursework, personal development planning. **In addition:** Essay. Individual research project. Project appraisals (formative) **(MBiolSci only).**

10. Progression points:

Progression from levels 4 to 5 and 5 to 6

The programme follows the scheme of progression set out in Senate Regulation 5 with the following additional requirements:

In order to remain on the MBiolSci programme students are required to achieve a CWA of at least 50% at the end of level 5 and have no resits. Students whose CWA is between 45-50% (or who have a resit) will be individually considered for progression by the exam board in light of mitigating or other circumstances. Students who fail to meet these criteria at the end of the second year are required to transfer to the relevant BSc programme.

The Board of Examiners reserves the right to determine the progression of students who carry failed credits but have the right to a further resit: where these credits are in modules that are pre-requisite for subsequent modules or where the student has a low overall level of attainment, the Board can require the student to repeat level 4 or resit the failed modules without residence rather than proceed to the next year carrying failed modules to be resat alongside the current modules. In cases where a student has failed to meet a requirement to progress he or she will be required to withdraw from the course.

Progression from level 6 to 7

To progress to level 7, students will need a level 6 CWA of 50% or higher, if students do not pass the level 6 (y3) 30 credit project module, they will be at high risk of not achieving the necessary credit weighted average for progression to level 7. Those failing to achieve this will be considered by the Board of Examiners for the appropriate BSc with or without industry or year abroad. In exceptional circumstances a student may fail credits in year 3. If only 15 credits are failed then students may proceed to level 7 and re-sit the failed assessments or alternatively graduate with a BSc; levels 4, 5 and 6 of the MBiolSci programme meet the intended learning outcomes of the equivalent BSc programme.

Progression to Year Abroad

Students will have the opportunity to take a Year Abroad either between levels 5 and 6 OR levels 6 and 7. Student can only take a Year Abroad on one occasion and cannot take both a Year Abroad AND a Year in Industry.

To take a Year Abroad after level 5, students would need a CWA of 55.00% or higher at both level 4 and 5 and be carrying no failed modules.

To take a Year Abroad after level 6, students would need a CWA of 55.00% or higher at levels 4, 5 and 6 and no failed modules.

Progression to Year in Industry

Students will have the opportunity to take a Year in Industry either between levels 5 and 6 OR levels 6 and 7. Student can only take a Year in Industry on one occasion and cannot take both a Year in Industry AND a Year Abroad

To take a Year in Industry after level 5, students would need to meet standard University eligibility requirements to progress to the next level of study. Students who obtain a level 5 CWA of less than 50.00% will be permitted to take a Year in Industry but will not be eligible for progression to level 7, and therefore would revert to a BSc (with a Year in Industry). See 'Progression from levels 4 to 5 and 5 to 6' for more information.

To take a Year in Industry after level 6, students would need a level 5 CWA of 50.00% or higher and a level 6 CWA of 50.00% or higher. Students who do not meet the eligibility criteria, but who meet the requirements to graduate with a BSc, would graduate that year with a BSc. See 'Progression from level 6 to 7' for more information.

Exit awards

Students who fail to complete level 5 study, level 6 study or level 7 study will be eligible for the exit awards: HECert Biological Sciences; HEDip Biological Sciences and BSc (hons) Biological Sciences respectively. Students are not permitted to register purely for this HECert or HE Dip.

Exit Awards are available (which cannot be applied for) as follows:

HECert Biological Sciences
HEDip Biological Sciences
BSc Biological Sciences*
BSc Biological Sciences (Biochemistry)*
BSc Biological Sciences (Genetics)*
BSc Biological Sciences (Microbiology)*
BSc Biological Sciences (Physiology with Pharmacology)*
BSc Biological Sciences (Neuroscience)*
BSc Medical Biochemistry*
BSc Medical Genetics*
BSc Medical Physiology*
BSc Medical Microbiology*

*with or without an optional Year in Industry or Year Abroad

For the Year in Industry variant, the additional programme outcomes apply

11. Criteria for award and classification

This programme follows the standard scheme of postgraduate award and classification set out in Senate Regulations – see the version of *Senate Regulation governing postgraduate programmes* relevant to the year of entry.

12. Special features

Students receive a broad level 4 education in biological sciences, Medical Biosciences and related disciplines along with training in key skills including the Leicester Award. As the course progresses into level 5 and 6, students have the option to specialise progressively within the specified subject streams or to retain a broader perspective. Opportunities are available to take placements within related industries, or to study at universities abroad.

The School of Biological Sciences has a strong reputation for research and the range of staff expertise enables provision of research-led, level 6 and 7 programmes that offer breadth and depth. In the fourth year, the students move on to a level 7, 60 credit taught programme that mirrors one of the School's laboratory-based MSc programmes; they then follow this up with a 60 credit research project.

The University recognises that undertaking a work placement as part the programme of study can enhance career prospects and provide added value, and as such this programme includes a 'year in industry' variant.

By experiencing real-world scenarios and applying skills and knowledge to a professional environment, students can gain a unique insight into how their studies can be utilised in industry. This will not only showcase their abilities to future employers but will also enhance their studies upon returning to university to complete your programme.

To understand the special features for year in industry undergraduate programme variants, this programme specification should be read in conjunction with the programme specification content which can be found here. This outlines details including programme aims, support, progression and duration.

13. Indications of programme quality

External examiner evaluations.
Annual Developmental Review
Periodic Development Review
Module Review
Destinations of Leavers from Higher Education (DLHE) and Longitudinal Educational Outcomes survey (LEO).
National Student Survey
Student Feedback

For the Year Industry variant the additional indications of programme quality apply

14. External Examiner(s) reports

The details of the External Examiner(s) for this programme and the most recent External Examiners' reports for this programme can be found at exampapers@Leicester [log-in required].

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Appendix 1: Programme structure (programme regulations)

The University regularly reviews its programmes and modules to ensure that they reflect the current status of the discipline and offer the best learning experience to students. On occasion, it may be necessary to alter particular aspects of a course or module.

For levels 4, 5 and 6 (Years 1, 2 and 3) of the MBiolSci programme, please see the programme specification for the relevant BSc programme

Biological Sciences BSc or

Biological Sciences (Biochemistry) BSc or

Biological Sciences (Genetics) BSc or

Biological Sciences (Microbiology) BSc or

Biological Sciences (Physiology with Pharmacology) BSc or

Biological Sciences (Neuroscience) BSc or

Medical Biochemistry BSc or

Medical Genetics BSc or

Medical Physiology BSc or

Medical Microbiology BSc

MBiolSci with a Year in Industry (if taking the Year in Industry between Year 2 and 3)

Core modules

Delivery period	Code	Title	Credits
Year Long	BS3400	Year in Industry Research Placement	0 credits

MBiolSci with a Year in Industry (if taking the Year in Industry between Year 3 and 4)

Core modules

Delivery period	Code	Title	Credits
Year Long	BS4400	Year in Industry Research Placement	0 credits

Routes through the MBiolSci fourth year at Level 7

Fourth year programmes can only be taken in single 120 credit blocks as follows

There are six Year 4 options available. Students will make decisions based on their interests and background in consultation with their Personal Tutor and the Programme Directors

Year 4 Option 1

Cancer Cell and Molecular Biology

Semester 1	BS4008	Core Laboratory Techniques	30 credits
Semester 1	BS4003	Research Methods in Cancer Biology	15 credits
Semester 1	BS4004	Advanced Topics in Cancer Biology	15 credits
Semester 2	BS4009	Research Project	60 credits

Year 4 Option 2

Molecular Genetics

Semester 1	BS4008	Core Laboratory Techniques	30 credits
Semester 1	BS4212	Experimental Design and Applications of Molecular Genetic Techniques in Research	30 credits
Semester 2	BS4009	Research Project	60 credits

Year 4 Option 3

Cancer Molecular Pathology and Therapeutics

Semester 1	BS4008	Core Laboratory Techniques	30 credits
Semester 1	BS4402	Molecular Methods in Experimental Design	15 credits
Semester 2	BS4403	Cancer Therapeutics	15 credits
Semester 2	BS4009	Research Project	60 credits

N.B. To balance credits, the project submission deadline for Option 3 is a month later than the deadline for project modules in other MBiolSci options.

Year 4 Option 4

Immunity, Infection and Chronic Disease

Semester 1	BS4008	Core Laboratory Techniques	30 credits
Semester 1	BS4309	Immunity, Infection & Chronic Disease	30 credits
Semester 1	BS4009	Research Project	60 credits

Year 4 Option 5

Neuroscience

Semester 1	BS4601	Advanced research methods; Evaluating, Planning and Analysing Research	30 credits
Semester 1	BS4602	Professional Research Skills: Finding Your Path in the World of Research	30 credits
Semester 1	BS4009	Research Project	60 credits

Year 4 Option 6

Bioinformatics

Semester 1	BS4101	Gene and Genome Analysis	15 credits
Semester 1	BS4102	Proteins	15 credits
Semester 1	BS4105	Bioinformatics Programming and Advanced Topics in Bioinformatics	30 credits
Semester 1	BS4009	Research Project	60 credits

Appendix 2: Module specifications

See postgraduate module specification database (Note - modules are organized by year of delivery) [login-required]