

Programme Specification

MSci Biological Sciences

For students entering Part 1 in September 2027

UCAS Code: C103

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This document sets out key information about your Programme and forms part of your Terms and Conditions with the University of Reading.

Awarding Institution	University of Reading
Teaching Institution	University of Reading
Length of Programme	4 years
Length of Programme with placement/year abroad	MSci Biological Sciences with Professional Experience - 5 years (UCAS Code: C104)
Accreditation	N/A
QAA Subject Benchmarking Group	Biosciences

Programme information and content

The MSci Biological Sciences programme builds on the flexibility and breadth of the BSc, while providing advanced training in research and professional development. It is designed to give you the opportunity not only to explore the full breadth of biology, but also develop the specialist skills and experience required to contribute at the forefront of biological science. You will be encouraged to cross traditional disciplinary boundaries and adopt a multifaceted perspective in addressing some of the most complex scientific and societal challenges.

From the outset, you will study the diversity of life and fundamental biochemical, evolutionary, cellular and physiological processes that underpin it. Through a wide range of optional modules, you can shape the direction of your programme – either maintaining breadth or specialising in areas such as molecular medicine, biotechnology, zoology or ecology. The MSci route then allows you to take this further, with advanced taught content in your final year that reflects the latest developments in research and applied practice.

Experiential learning remains central to the programme. You will be immersed in laboratory-based practicals and fieldwork (both locally and abroad), gradually developing your independence as a researcher. This culminates in an extended final-year research project, where you will work closely with academic staff on cutting-edge investigations. Alongside this, you will continue to build your professional and transferable skills, supported through a skills portfolio, placement opportunities, employer-led sessions and career development workshops.

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Part 1:	You will gain a broad introduction to biological sciences in your first year. This will be delivered in the form of core modules, covering the fundamental aspects of biology including evolution, molecular biology, cell biology, genetics, physiology and organismal diversity. You will also be taught essential laboratory/field skills, data handling/interpretation and other key transferable skills (e.g. communication, academic integrity, teamwork). The goal of the first year is to give you a strong foundation on which to develop your interests and build your future studies.
Part 2:	The second year will offer you the opportunity to pursue your interests in greater depth and/or specialise across a series of optional modules. These modules will provide advanced knowledge in various areas of biology, including conservation, ecology, molecular biology, biochemistry and microbiology. You will continue to enhance your practical and transferrable skills, including creativity, enterprise and commercial awareness. You can also develop your field skills and broaden your horizons by participating in a field course at home or abroad (where applicable).
Placement/Study abroad year:	You will have the opportunity to undertake a placement year and discover what it is like to work in a professional setting. This will allow you to develop your skills further, expand your network and enhance your career prospects. The school has numerous contacts within and beyond the UK, ranging from the pharmaceutical sector to conservation organisations. Students can express their interest to the school and receive guidance and support throughout the placement application process.
Part 3:	The third year of the programme places a strong emphasis on the application of knowledge and skills. Alongside chosen modules from across the breadth of biology, the highlight of the final year is the opportunity to work alongside an expert in the field on a unique research project. This capstone experience will allow you to develop an advanced understanding of your chosen topic and apply the skills that you have acquired from your first and second year. This will allow you to further develop your personal and professional identity as a biologist.
Part 4:	In the fourth year of the programme you will gain advanced scientific and technical skills to solve complex research questions. You will undertake a 80-credit research-intensive project over a period of five months. This substantial research project will provide you with the opportunity to independently plan, execute, analyse and communicate a research project in a specialised area of biology-related research. You will develop valuable transferable skills that are highly desirable for employers, offering you excellent preparation for postgraduate research or a wide variety of future careers.

Programme Learning Outcomes - MSci Biological Sciences

During the course of the Programme, you will have the opportunity to develop a range of skills, knowledge and attributes (known as learning outcomes) For this programme, these are:

	Learning outcomes
1	Demonstrate a broad understanding of Biological Sciences, together with specialised in-depth knowledge in more specialised fields, particularly at the molecular and/or organism level
2	Apply an interdisciplinary and multidisciplinary approach in advancing knowledge and understanding the complexity and diversity of life through to the study of organisms, their molecular, cellular and physiological processes, their genetics and evolution and the interrelationships between them and their environment
3	Identify and discuss the essential facts, major concepts, paradigms, principles and/or theories associated with Biological Sciences
4	Recognise the current developments in Biological Sciences and discuss their applications, contributions to policy, controversies and other debates
5	Effectively communicate subject-specific knowledge, concepts and research outputs to technical and non-technical audiences using a range of multimedia formats
6	Analyse experimental and observational biological data using relevant statistical tests/analytical tools and interpret the results, recognising the limitations of data collection and statistical methodology
7	Organise and manage workload to complete tasks and projects effectively, both independently and collaboratively as part of a team
8	Search for, critically analyse, integrate, synthesise and evaluate scientific literature to draw conclusions, make hypotheses and suggest solutions
9	Safely and competently use a range of practical laboratory and/or field skills and techniques to generate accurate records and robust datasets
10	Use a creative, innovative and evidence-based approach to propose realistic solutions for complex biological and real-world problems in light of continued scientific advances
11	Independently design, execute, and critically evaluate complex research within a biology-related field.
12	Employ diverse research methodologies, data collection techniques, and analytical tools, exhibiting a high level of adaptability and innovation in solving research problems.

You will be expected to engage in learning activities to achieve these Programme learning outcomes. Assessment of your modules will reflect these learning outcomes and test how far you have met the requirements for your degree.

To pass the Programme, you will be required to meet the progression or accreditation and award criteria set out below.

In addition to the learning outcomes stated above if you are on a placement or study abroad programme you will have the opportunity to develop the following learning outcome:

Additional Learning outcomes
Placement By the end of the Placement Year Programme, students will have explored and developed their professional experience, skills and knowledge, contributing significantly towards their continuous learning and career prospects as graduates.

Module information			
Each part comprises 120 credits, allocated across a range of compulsory and optional modules as shown below. Compulsory modules are listed.			
Part 1 Modules:			
Module	Name	Credits	Level
BI1AP3	Anatomy and Physiology	20	4
BI1CMP1	Cellular and Molecular Principles of Life	20	4
BI1FM1	Fundamentals of Microbiology	20	4
BI1FOE2	Fundamentals of Evolution	20	4
BI1HLE2	History of Life on Earth	20	4
Students will need to choose between BI1FB2 Fundamentals of Biochemistry or BI1FE2 Fundamentals of Ecology to achieve a total of 120 credits.			
Part 2 Modules:			
Module	Name	Credits	Level
BI2CM1	Advanced Studies in Cellular and Molecular Biology	20	5
Students will need to choose between the compulsory BI2RP3 Research and Professional Skills or BI2QP3 Quantitative and Professional Skills			
The remaining 80 credits will be made up of optional modules from selected modules from the School of Biological Sciences or modules from an approved list, subject to timetabling constraints.			
Modules during a placement year or study year (if applicable):			
Module	Name	Credits	Level
BI2PEX	Professional Experience	120	5
Students may be permitted to undertake a placement year between Part 2 and Part 3 of the programme. In such cases students will transfer to a 4-year programme. The placement year should not normally be shorter than nine months full-time.			
If you take a year-long placement or study abroad, Part 3 as described below may be subject to variation.			
Part 3 Modules:			
Module	Name	Credits	Level
BI3RP3	Research Project	40	6
BI3VP1	Venoms and Poisons: from Pharmacology to Therapeutics	20	6

The remaining 60 credits will be made up of optional modules from selected modules from the School of Biological Sciences or modules from an approved list, subject to timetabling constraints.

Part 4 modules:

Module	Name	Credits	Level
BI4ARP	Advanced Research Project	80	7

Students will then need to select one of the following blocks (40 credits)

Biomedical Route:

Module	Name	Credits	Level
BI4APS1	Critical Analysis and Problem Solving	20	7
BI4PLE1	Project Planning, Laboratory Skills and Experimental Design	20	7

Ecology/Zoology Route:

Module	Name	Credits	Level
BIMRED1	Research Skills and Experimental Design	20	7
BI4ZEE1	Seminars in Zoology, Ecology and Evolution	20	7

Placement opportunities

Placements:

You may be provided with the opportunity to undertake a credit-bearing placement as part of your Programme. This will form all or part of an optional module. You will be required to find and secure a placement opportunity, with the support of the University

Study Abroad:

You may be provided with the opportunity to undertake a Study Abroad placement during your Programme. This is subject to you meeting academic conditions detailed in the Programme Handbook, including obtaining the relevant permissions from your School, and the availability of a suitable Study Abroad placement. If you undertake a Study Abroad placement, further arrangements will be discussed and agreed with you.

Optional modules:

The optional modules available can vary from year to year. An indicative list of the range of optional modules for your programme can be found online in the Course Catalogue. Details of optional modules for each part, including any additional costs associated with the optional modules, will be made available to you prior to the beginning of the Part in which they are to be taken and you will be given an opportunity to express interest in the optional

modules that you would like to take. Entry to optional modules will be at the discretion of the University and subject to availability and may be subject to pre-requisites, such as completion of another module. Although the University tries to ensure you are able to take the optional modules in which you have expressed interest this cannot be guaranteed.

Teaching and learning delivery:

Elements of your programme will be delivered via digital technology.

The scheduled teaching and learning activity hours and amount of technology enhanced learning activity for your programme will depend upon your module combination. In addition, you will undertake some self-scheduled teaching and learning activities, designed by and/or involving staff, which give some flexibility for you to choose when to complete them. You will also be expected to undertake guided independent study. Information about module study hours including contact hours and the amount of independent study which a student is normally expected to undertake for a module is indicated in the relevant module description.

Accreditation details

N/A

Assessment

The programme will be assessed through a combination of written examinations, coursework (including class tests) and oral examinations. Further information is contained in the individual module descriptions.

Progression

Part 1

To achieve a threshold performance at Part 1, a student will normally be required to:

- (i) Obtain an overall weighted average of 40% over 120 credits taken in Part 1; and
- (ii) Obtain a mark of at least 40% in individual modules amounting to not less than 80 credits taken in Part 1; and
- (iii) Obtain marks of at least 30% in modules amounting to 120 credits. (A Fail in a Pass/Fail module will be treated as not meeting the minimum threshold requirement for progression or classification. Pass/fail modules are excluded from weighted average calculations but must be passed to avoid failure of the Part or degree.)

In order to progress from Part 1 to Part 2, a student must achieve a threshold performance.

The achievement of a threshold performance at Part 1 qualifies a student for a Certificate of Higher Education if they leave the University before completing the subsequent Part.

Students considering transferring to another programme should seek guidance from their designated Support Centre in the first instance.

Part 2

To achieve a threshold performance at Part 2, a student shall normally be required to:

- (i) Obtain a weighted average of 40% over 120 credits taken in Part 2; and
- (ii) Obtain marks of at least 40% in individual modules amounting to at least 80 credits taken in Part 2; and
- (iii) Obtain marks of at least 30% in individual modules amounting to at least 120 credits (A Fail in a Pass/Fail module will be treated as not meeting the minimum threshold requirement for progression or classification. Pass/fail modules are excluded from weighted average calculations but must be passed to avoid failure of the Part or degree).

In order to progress from Part 2 to Part 3, a student must achieve a threshold performance; and

- (v) an overall average of 50% over 120 credits taken in Part 2 (of which not less than 100 credits should normally be at level 5 or above).

The achievement of a threshold performance at Part 2 qualifies a student for a Diploma of Higher Education if they leave the University before completing the subsequent Part.

Professional/placement year

Students are required to pass the professional placement year/study abroad year in order to progress on the programme which incorporates the professional placement year/study abroad year. Students who fail the professional placement year/study abroad year transfer to the non-placement year version of the programme.

Part 3

To achieve a threshold performance at Part 3, a student shall normally be required to:

- (i) achieve a weighted average of 40% over 120 credits taken in Part 3 and
- (ii) obtain a mark of at least 40% in individual modules amounting to not less than 80 credits taken in Part 3, and with no marks below 30%.

In order to progress from Part 3 to Part 4, a student must achieve a threshold performance; and

- (iii) a mark of at least 40% in BI3RP3;

Students who do not meet the above requirements to progress to Part 4, but who:

- (i) meet the requirements described in the appropriate section of the Assessment Handbook please see link below for further details; and
- (ii) gain a mark of at least 40% in BI3RP3

Will be eligible for the BSc Biological Sciences. The classification for this exit award will be based upon an overall weighted average ratio of 1:2 (Part 2: Part 3).

Classification

Bachelors' degrees

The University's honours classification scheme is based on the following:

Mark Interpretation

70% - 100% First class

60% - 69% Upper Second class

50% - 59% Lower Second class

40% - 49% Third class

35% - 39% Below Honours Standard

0% - 34% Fail

The weighting of the Parts/Years in the calculation of the degree classification is:

Part 2: 20%

Placement/Study Abroad Year: not included in the classification

Part 3: 40%

Part 4: 40%

Students who do not meet the above Part 4 requirements for obtaining the MSci Biological Sciences degree but who have achieved all previous progression requirements will be eligible for the award of BSc Biological Sciences. The classification for this exit award will be based upon an overall weighted average ratio of 1:2 (Part 2: Part 3).

Details of the classification method is given in detail in the [Assessment Handbook](#) under:

- Section 17: Awards (Bachelor's), or
- Section 18: Awards (Integrated Master's programmes). Students who do not progress to Part 4 of the Integrated Master's will normally be subject to the method detailed under Section 17: Awards (Bachelor's)

Please note that there may be a specific version of the above for your year of entry.

Additional costs of the programme

Participation in any residential field based optional modules offered, is subject to fees payable by the student.

If you undertake a Placement Year, associated costs will vary according to the nature and location of the placement and/or the study abroad host institution, and individual travel and subsistence arrangements.

Costs are indicative and may vary according to optional modules chosen and are subject to inflation and other price fluctuations. Estimates were calculated in 2026.

Students may consider purchasing a laptop to help support their learning. Information on recommended device specifications can be found on the [DTS Student Hub](#).

For further information about your Programme please refer to the Programme Handbook and the relevant module descriptions, which are available at <http://www.reading.ac.uk/module/>. The Programme Handbook and the relevant module descriptions do not form part of your Terms and Conditions with the University of Reading.

MSci Biological Sciences for students entering Part 1 in session 2027/28

10 June 2026

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