

#### MBiol

## **Bioveterinary Science**

UCAS code D903

Entry requirements	Study mode	Duration
A level: ABB	Full-time	4 years

Apply by: **29 January 2025** Starts on: **22 September 2025** 

## About this course

This three-year programme will provide you with a wide knowledge of biological and veterinary animal sciences, practical techniques and transferable skills for careers allied to veterinary science, scientific research, conservation, animal welfare and the biotechnology and pharmaceutical industries.

### Introduction

The Master of Bioveterinary Sciences (MBiol) is a four-year programme, in which students first follow the three-year BSc in Bioveterinary Sciences and then continue into a fourth year, subject to performance.

In the first three years, you'll study a broad range of modules including animal behaviour, animal anatomy and husbandry and epidemiology with the opportunity to specialise and carry out your own research project.

The fourth (Master's) year aims at developing enhanced research and personal skills for students seeking a high-level career in research (e.g. studying for a PhD or working in industry) or those seeking to enhance their qualification. Students will join a research team to undertake a significant research project. Students can also apply for a six-week summer research internship in the UK or overseas or apply to spend time working in industry or in other enterprises in the final year.

## What you'll learn

- Learn about husbandry and welfare of domestic species including appropriate breed choices, behaviour, housing, management, diet and reproduction
- Understand the biology of important animal infections and how this is being translated into novel disease therapies
- Assess and describe the comparative pathology, cellular and immunological responses in veterinary diseases in different species
- Describe the legal and organisational processes in place in the UK and more widely to monitor, survey and control a range of diseases in animal populations
- Become literate in finding, interpreting, evaluating and managing information
- Communicate ideas effectively to a variety of audiences
- Work independently and collaboratively
- Develop critical thinking and problem-solving skills
- Use lab equipment correctly and safely
- Plan, initiate, and carry out projects

## **Course content**

Discover what you'll learn, what you'll study, and how you'll be taught and assessed.

#### Year one

In this first year, you'll gain an understanding of core concepts of biology as well as the fundamental principles of immunity, infection, and therapy. You will also study how organisms develop and function and learn about ecology and the global environment. You will develop practical skills and participate in field studies, and you will discover how to utilise quantitative skills and study techniques.

#### COMPULSORY MODULES

- Biology core concepts, principles, and fundamentals BIOS101
- Development, function, immunity, infection, and therapeutics BIOS102
- Introductory Practical Skills for Life Sciences BIOS103
- From Individuals to Ecosystem BIOS104
- Study and Communication Skills Tutorials BIOS105
- Applied Practical Research Skills for Life Sciences BIOS106

Programme details and modules listed are illustrative only and subject to change.

#### Year two

In your second year you'll expand your range of knowledge building those essential research skills, experimental design and analysis together with professional skills preparing you for a career within or outside the area of Bioveterinary Sciences. You will study animal behaviour and explore the relationship between hosts and parasites. In addition, you will have optional modules enabling you to follow your interest in animal physiology or microbiology.

#### COMPULSORY MODULES

- Genetics, Microbiology & Infection BIOS201
- Intermediary Practical Research Skills for Life Sciences BIOS203
- Academic & professional skills tutorials BIOS205
- Animal Behaviour BIOS207

- Parasites, Pathogens and Hosts BIOS211
- Animal Anatomy, Physiology & Husbandry BIOS220

OPTIONAL MODULES (CHOOSE ONE)

- Practical Skills in Microbiology, Infection & Disease BIOS206
- Practical Skills in Evolution, Ecology and Behaviour BIOS208

OPTIONAL MODULES (CHOOSE ONE)

- Molecular Microbiology & Therapeutics BIOS218
- Animal Ecophysiology BIOS222

Programme details and modules listed are illustrative only and subject to change.

#### Year three

Year three will provide an unparalleled opportunity for you to learn at the cutting edge of bioveterinary research and be taught by world-leading academics in the subjects of disease surveillance and infection biology. You will also develop commercial awareness skills and you will have the opportunity to take a physical or virtual placement. Central to this year is the research project where you will plan and execute your own research, analyse and critically evaluate data and communicate your research findings in your chosen specialisation.

#### COMPULSORY MODULES

- Research Project BIOS301
- Introduction to the World of Work BIOS302
- Research Methods BIOS303
- Bioveterinary Innovation and Entrepreneurship BIOS312
- Veterinary Infection Biology BIOS321
- Surveillance, Epidemiology and Control of Disease in Animal Populations BIOS323
- Immunology and Veterinary Pathology BIOS335

Programme details and modules listed are illustrative only and subject to change.

#### Year four

The fourth year of study offers great flexibility – students may spend it entirely on campus at Liverpool, but more commonly they take up opportunities to broaden their experiences, for example a six-week research internship in the UK (in hospitals, industry or research institutes) or abroad (in our partner universities in Thailand or China). Others may elect to spend the entire fourth year on placement, in similar host institutions. Students will take core modules in research methods and statistics or informatics, together with a 60-credit research project. Students may replace the internship with other modules that cover advanced topics of global importance.

#### COMPULSORY MODULES

- Research Project LIFE700
- Research Methods LIFE731

OPTIONAL MODULES (CHOOSE ONE)

- Advanced Statistics for Biological Research LIFE707
- Informatics for Life Sciences LIFE721

OPTIONAL MODULES (Students choose either the research internship, or two of the remaining modules)

- Research Internship LIFE701
- Coding for Life Sciences LIFE733
- Emerging Infections and Pandemic LIFE751
- Immunology LIFE728
- Diagnostics Therapeutics and Vaccines LIFE732
- Computational Biology LIFE752
- Proteomics, Metabolomics and Data Analysis LIFE754
- Analysing Climate processes and variability ENVS475
- Advanced Conservation Biology ENVS423
- Informatics for Life Sciences (Off campus) LIFE621

Programme details and modules listed are illustrative only and subject to change.

#### **Teaching and assessment**

## How you'll learn

You will experience a range of learning environments during your studies at Liverpool. These will include student-centred activities as well as lectures, tutorials, laboratory practicals, dissection classes, fieldwork, data handling sessions and computer workshops. Some of these activities will be performed individually, such as personal research projects, and others in small tutorial or project groups, in addition to formal lectures and workshops. You will have research staff as well as your own academic adviser for individual tuition on our acclaimed tutorial programme.

## How you're assessed

As well as factual knowledge and understanding, biologists need practical and organisational skills, and an ability to work both alone and with other people. We record the development of these abilities through continuous assessment during each semester and by final examination.

## **Liverpool Hallmarks**

We have a distinctive approach to education, the Liverpool Curriculum Framework, which focuses on research-connected teaching, active learning, and authentic assessment to ensure our students graduate as digitally fluent and confident global citizens.

The Liverpool Curriculum framework sets out our distinctive approach to education. Our teaching staff support our students to develop academic knowledge, skills, and understanding alongside our **graduate attributes**:

- Digital fluency
- Confidence
- Global citizenship

Our curriculum is characterised by the three Liverpool Hallmarks:

- Research-connected teaching
- Active learning
- Authentic assessment

All this is underpinned by our core value of **inclusivity** and commitment to providing a curriculum that is accessible to all students.

## **Careers and employability**

As a Biosciences graduate from the University of Liverpool, you will have an excellent set of career options ahead of you.

#### Typical types of roles/routes our graduates have gone on include:

- Postgraduate study: (MBiolSci, MSc, MRes, MPhil or PhD)
- Public sector research institutes, government departments, the National Health Service, forensic science and the Environment Agency.
- Commercial sectors pharmaceutical, food, biotechnology, water and agriculture industries.
- Journalists and information/liaison officers by developments in molecular biology and biotechnology.
- Teaching profession by taking a postgraduate qualification (PGCE).
- Routes to postgraduate Medicine, Dentistry or Veterinary Science.

#### Work experience opportunities

Students on our four-year MBiolSci programme have the opportunity to take elective internships abroad at our partner institutions. For example, while at universities in Thailand, students have worked on topics such as coral reef and mangrove ecology, genetics of shrimp development and new drugs for tuberculosis.

Students in their final year of the MBiolSci programme also have the opportunity to take a six-week biosciences-related internship as an optional fourth year module which runs during the course of the summer prior to Year Four. Alternatively, students can spend the entire final Year Four in industry or other enterprises. Internships and placements are subject to availability.

You will have the exciting option to undertake a foreign field course in western Uganda which is available when studying a number of our undergraduate degree programmes. The 12-day trip involves study at both the Kibale National Park (10 days) and Queen Elizabeth National Park (two days).

Topics covered whilst in Uganda include tropical forest and savannah ecology, biodiversity patterns, primate behaviour, and ecology, subsistence versus commercial agricultural practices, and ecotourism.

In addition, there is the option of the LIFE399 Life Sciences work-based placement module. LIFE399 is an optional third-year module that runs during the course of the summer prior to Year Three. Students will undertake a placement to assist their personal development and employability and will complete a skills audit, reflective log, and report, based on their experience. The module is worth 15 academic credits. You can further explore postgraduate opportunities at <u>taught</u> or <u>research</u> level here at Liverpool.

## **Fees and funding**

Your tuition fees, funding your studies, and other costs to consider.

### **Tuition fees**

# UK fees (applies to Channel Islands, Isle of Man and Republic of Ireland)

Full-time place, per year - £9,535 Year abroad fee - £1,430 (applies to year in China)

#### **International fees**

Full-time place, per year - £29,100 Year abroad fee - £14,550 (applies to year in China)

The tuition fees shown are correct for 2025/26 entry. Please note that the year abroad fee also applies to the year in China.

Tuition fees cover the cost of your teaching and assessment, operating facilities such as libraries, IT equipment, and access to academic and personal support. Learn more about paying for your studies.

### **Additional costs**

We understand that budgeting for your time at university is important, and we want to make sure you understand any course-related costs that are not covered by your tuition fee. This includes the costs associated with placements or internships and the optional field course in Uganda.

Students should expect to cover the following costs.

#### Costs associated with placements/internships

Students in Biosciences who have chosen international placements/internships will need to pay for their visa (if applicable), travel, accommodation, and meals.

There may also be costs associated with travel to interviews for placements/internships. These will vary, and some other extra costs may also be

incurred. If students are spending a full year in industry, their employers may pay transport costs. School and University bursaries may be available to help with the cost of these opportunities.

Students might choose to pay for additional optional vaccinations in addition to the compulsory ones that the School pays for.

#### Tropical ecology field course

Students who elect to take the optional tropical ecology field course in Uganda are required to make a financial contribution that covers their own costs (travel, meals, visa, accommodation, and entry to national parks). In 2020-21, the student contribution was £1,500. A limited number of funded places are available.

Students might choose to pay for additional optional vaccinations in addition to the compulsory ones that the School pays for.

Find out more about additional study costs.

## **Entry requirements**

The qualifications and exam results you'll need to apply for this course.

#### A levels

ABB including Biology and a second science, preferably Chemistry.

Applicants with the Extended Project Qualification (EPQ) are eligible for a reduction in grade requirements. For this course, the offer is **BBB** with **A** in the EPQ.

You may automatically qualify for reduced entry requirements through our contextual offers scheme. Based on your personal circumstances, you may automatically qualify for up to a two-grade reduction in the entry requirements needed for this course. When you apply, we consider a range of factors – such as where you live – to assess if you're eligible for a grade reduction. You don't have to make an application for a grade reduction – we'll do all the work.

Find out more about how we make reduced grade offers.

If you don't meet the entry requirements, you may be able to complete a foundation year which would allow you to progress to this course.

Available foundation years:

• Biological Sciences (with a Foundation Year) BSc (Hons)

#### T levels

Health and Science (Science pathway) is accepted with an overall grade of Distinction to include B in the core.

Applicants should contact us by <u>completing the enquiry form on our</u> <u>website</u> to discuss specific requirements in the core components and the occupational specialism.

#### GCSE

4/C in English and 4/C in Mathematics

#### Subject requirements

Biology and a second science, preferably Chemistry, at A level.

Also accepted as a second science: Environmental Science, Mathematics, Physics, Geography, Psychology, Geology and Applied Science.

For applicants from England, where A levels in Biology, Chemistry or Physics have been taken, we will also require a pass in the Practical Endorsement.

#### **BTEC Level 3 National Extended Diploma**

D\*DD in Applied Science with a selection of preferred units in Biology and Chemistry, to include Distinction in Units 1 and 5 (Principles and Applications of Science I and II).

For previous BTEC (QCF) qualification:

D\*DD in Applied Science with a selection of preferred units in Biology and Chemistry, with at least 120 Level 3 credits at Distinction.

Please note alternative BTEC subjects are not acceptable for this programme.

#### **BTEC Applied Science unit requirements**

View the BTEC Applied Science unit requirements.

#### International Baccalaureate

33 points including 6 in Higher Level Biology and 5 in Higher Level Chemistry (or second science).

#### Irish Leaving Certificate

H1, H2, H2, H2, H3, H3

#### Scottish Higher/Advanced Higher

Not accepted without Advanced Highers

#### Welsh Baccalaureate Advanced

Accepted at grade B as equivalent to a third non-science A level at grade B.

#### Access

45 Level 3 credits in graded units in a relevant Diploma, including 30 at Distinction and a further 15 with at least Merit. 15 Distinctions are required in each of Biology and Chemistry. GCSE Mathematics and English grade C/4 also required.

#### International qualifications

#### Select your country or region to view specific entry requirements.

If you hold a bachelor's degree or equivalent, but don't meet our entry requirements, you could be eligible for a Pre-Master's course. This is offered on campus at the <u>University of Liverpool International College</u>, in partnership with Kaplan International Pathways. It's a specialist preparation course for postgraduate study, and when you pass the Pre-Master's at the required level with good attendance, you're guaranteed entry to a University of Liverpool master's degree.

### **English language requirements**

You'll need to demonstrate competence in the use of English language, unless you're from a majority English speaking country.

We accept a variety of <u>international language tests</u> and <u>country-</u> <u>specific qualifications</u>.

International applicants who do not meet the minimum required standard of English language can complete one of our <u>Pre-Sessional English courses</u> to achieve the required level.

#### IELTS

6.5 overall, with no component below 5.5

#### **TOEFL iBT**

88 overall, with minimum scores of listening 17, writing 17, reading 17 and speaking 19. TOEFL Home Edition not accepted.

#### **TOEFL Paper**

Grade 7 at Standard Level or grade 6 at Higher Level

#### **Duolingo English Test**

125 overall, with speaking, reading and writing not less than 105, and listening not below 100

#### Pearson PTE Academic

61 overall, with no component below 59

#### LanguageCert Academic

70 overall, with no skill below 60

#### Cambridge IGCSE First Language English 0500

Grade C overall, with a minimum of grade 2 in speaking and listening. Speaking and listening must be separately endorsed on the certificate.

#### Cambridge IGCSE First Language English 0990

Grade 4 overall, with Merit in speaking and listening

#### Cambridge IGCSE Second Language English 0510/0511

0510: Grade B overall, with a minimum of grade 2 in speaking. Speaking must be separately endorsed on the certificate. 0511: Grade B overall.

#### Cambridge IGCSE Second Language English 0993/0991

0993: Grade 6 overall, with a minimum of grade 2 in speaking. Speaking must be separately endorsed on the certificate. 0991: Grade 6 overall.

#### Cambridge ESOL Level 2/3 Advanced

176 overall, with no paper below 162

#### LanguageCert

Grade 5 at Standard Level or grade 5 at Higher Level

## **Pre-sessional English**

Do you need to complete a Pre-sessional English course to meet the English language requirements for this course?

The length of Pre-sessional English course you'll need to take depends on your current level of English language ability.

#### Pre-sessional English in detail

If you don't meet our English language requirements, we can use your most recent IELTS score, or <u>the equivalent score in selected other English language tests</u>, to determine the length of Pre-sessional English course you require.

Use the table below to check the course length you're likely to require for your current English language ability and see whether the course is available on campus or online.

Your most recent IELTS score	Pre-sessional English course length	On campus or online
6.0 overall, with no component below 5.5	6 weeks	On campus
5.5 overall, with no component below 5.5	10 weeks	On campus and online options available
5.5 overall, with no more than one component below 5.5, and no component below 5.0	12 weeks	On campus and online options available
5.5 overall, with no component below 4.5	20 weeks	On campus
5.0 overall, with no component below 4.5	30 weeks	On campus

Your most recent IELTS score	Pre-sessional English course length	On campus or online
4.5 overall, with no more than one component below 4.5, and no component below 4.0	40 weeks	On campus

If you've completed an alternative English language test to IELTS, we may be able to use this to assess your English language ability and determine the Pre-sessional English course length you require.

Please see our guide to <u>Pre-sessional English entry requirements</u> for IELTS 6.5 overall, with no component below 5.5, for further details.

### Alternative entry requirements

- If your qualification isn't listed here, or you're taking a combination of qualifications, <u>contact us</u> for advice
- Applications from mature students are welcome.

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