UNIVERSITY OF LIVERPOOL

Bioveterinary Science MBiol

COURSE DETAILS

- A level requirements: AAB
- UCAS code: D903
- Study mode: Full-time
- Length: 4 years

KEY DATES

- Apply by: 31 January 2024
- Starts: 23 September 2024

Course overview

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

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

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.

Careers and employability

As a Life Sciences 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 life sciences 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 taught or research level here at Liverpool.

4 IN 5 **LIFE SCIENCES STUDENTS FIND THEIR MAIN ACTIVITY AFTER GRADUATION MEANINGFUL.**

Graduate Outcomes, 2018-19.

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	£9,250

International fees	
Full-time place, per year	£27,200

Fees are correct for the academic year 2024/25
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 tuition fees, funding and student finance.

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.

Find out more about the additional study costs that may apply to this course.

SCHOLARSHIPS AND BURSARIES

We offer a range of scholarships and bursaries to provide tuition fee discounts and help with living expenses while at university.

Check out our Undergraduate Global Advancement Scholarship. This offers a tuition fee discount of up to £5,000 for eligible students starting an undergraduate degree from September 2024. There's also the Liverpool Bursary which is worth £2,000 per year for eligible students.

Discover our full range of undergraduate scholarships and bursaries

Entry requirements

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

Your qualification	**Requirements** About our typical entry requirements
A levels	AAB Applicants with the Extended Project Qualification (EPQ) are eligible for a reduction in grade requirements. For this course, the offer is **ABB** with **A** in the EPQ. You may automatically qualify for reduced entry requirements through our contextual offers scheme. 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) leading to BSc (Hons)
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*D*D 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*D*D in Applied Science with a selection of preferred units in Biology and Chemistry, with at least 120 Level 3 credits at

Your qualification	**Requirements** About our typical entry requirements
	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	34 points, including 6 in Higher Level Biology, and 5 in another Higher Level Subject
Irish Leaving Certificate	H1, H1, H2, H2, H2, 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	Many countries have a different education system to that of the UK, meaning your qualifications may not meet our entry requirements. Completing your Foundation Certificate, such as that offered by the University of Liverpool International College, means you're guaranteed a place on your chosen course.

ALTERNATIVE ENTRY REQUIREMENTS

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

THE ORIGINAL REDBRICK