

Lancaster  
University



Biosciences  
Undergraduate degrees  
2024



For more information visit [lancaster.ac.uk/biosciences](http://lancaster.ac.uk/biosciences)

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As we look around at the world it can be easy to throw up our hands in despair. The climate crisis, novel diseases and pandemics, mass extinction of animal populations caused by human activity all seem to have become the new normal. There are immense challenges facing humanity, problems that won't just go away. Problems that need people to find and implement solutions to fix them.

### People like you.

The Biosciences at Lancaster University encompasses Biology, Biomedicine, Biochemistry, Zoology and Ecology & Conservation, and seeks to provide you with the tools to answer these challenges. It might be that your studies so far have sparked an interest in disease and how we diagnose and find treatments and cures; perhaps your passion is the natural world and animal conservation; maybe you want to understand the fundamental structures of living organisms, or want to help find solutions to man-made climate change. The Biosciences covers these and much, much more.

At Lancaster University our Division of Biomedical and Life Sciences, and the Lancaster Environment Centre come together to provide a complete and holistic approach to studying the science of life. From the biochemical pathways and processes that drive cells, to global ecosystems and everything in between, studying at Lancaster will give you the knowledge and skills to make the difference you want.

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### Biomedical Sciences

**1<sup>st</sup>** in the UK  
for Graduate  
Prospects.

The Guardian  
University Guide  
2023

### Biomedical Sciences

**3<sup>rd</sup>** in the UK.

The Complete  
University Guide  
2024

### Biological Sciences

**4<sup>th</sup>** in the UK for  
satisfaction with  
teaching.

The Guardian  
University Guide  
2023



## Our degrees

### Biology

Biology is the most flexible of our programmes of study, enabling you to develop your interests in the subject. You can choose to study topics from across the whole of biology or focus on the areas that interest you most from your second year onwards including biomolecular, biomedicine, cell biology and zoology-related topics.

### Ecology and Conservation

You will examine the ecology and conservation of different ecosystems, in which organisms are locked in complex interactions with each other and their environment. It's a diverse field and your degree will focus on areas including animal behaviour, evolution and global change biology.

### Biochemistry

Biochemistry is an exciting and rapidly developing subject within the Biosciences and Medicine. You will examine the structure and

function of living organisms at the molecular and cellular level, studying core modules in biochemistry and chemistry.

### Biomedicine

Our flexible Biomedicine and our IBMS-accredited Biomedical Science degree courses are aimed at those with a broad interest in human life processes and disease, and give you the opportunity to gain an in-depth understanding of the techniques and issues associated with modern biomedical research.

### Zoology

You will learn about taxonomy and the diversity of animal life, cellular processes and physiology, animal behaviour, through to evolution, ecology and conservation. You will be able to focus on the areas within zoology that interest you the most.



## Practical study

We place great emphasis on practical learning, whether that is in our teaching labs or out in the field. Practical learning enables you to put theory into practice and understand the principles underpinning the topics you are studying, whilst also developing skills which will be of use throughout your degree and future career. On average, 50% of your contact time will be practical study which includes:

Workshops

Laboratory-based work

Computer-based workshops

Field trips

## Field trips

Lancaster's location is a 'living laboratory'. It allows us to give you regular hands-on experience of a wide range of environmental and ecological situations in the local area. Depending on your degree scheme, you will also have the opportunity to travel further afield and even overseas on a range of exciting trips that will place your studies in the context of real-world issues.

Please note that overseas opportunities may be impacted by international travel or Government border restrictions. Destinations are given as a guide only as the availability of places at overseas partners may vary year to year.

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## Meet our students



### Sophia, Zoology

One of the main reasons why I chose Zoology at Lancaster is that it is a highly flexible degree programme that covers multiple fields ranging from biology to ecology. Here I am able to pursue my diverse interests and gain an array of scientific skills, from lab work and etiquette to taking samples in the field and preparing them for analysis.

Best of all, being taught by researchers that are passionate about what they teach makes a big difference. They are accessible and approachable, and we have the chance to ask them questions and resolve our doubts. Practical lab sessions and seminars are also highly instructive and critical to strengthening lecture content. They provide different modes of learning where you can figure out what works best for you. I have found library workshops and reading resources to be particularly helpful, as they are also a great tool to delve deeper into all of the material and gain a greater sense of independence as I learn.



### Briony, Biology

I chose Lancaster because of the choice of modules from first year onwards; no other university that I looked at seemed to give quite as diverse a choice. Setting in at Lancaster was easy, the campus has a great atmosphere, and there is support from everywhere if you need it.

I really enjoy my studies and I've chosen a lot of ecology based modules this year, and through all the work and research I've done for these modules I would say I have a renewed hope for the future of the planet.

Outside of my studies, I work for the Children's and Young People's Ambassadors scheme with the Students Union. When they have primary school classes coming to campus for days out, we run workshops and activities with them. I'm planning on doing teacher training after I graduate, and this experience alongside the employability module we complete during second year has really helped me. The employability module helped me practice writing cover letters and completing interviews specific to a career in teaching.



### **Melissa, Biochemistry**

I felt like the whole vibe and atmosphere of Lancaster was the best: when I came on the Open Day straight away it was the labs that blew me away, they were so modern.

By choosing biochemistry it's allowed me to further learn about impacts of people's environments or genetics and how they may get diseases. In the first year my degree was split between biology and chemistry so you could gauge what you wanted to choose in the second year, and even though I'm not doing straight chemistry there is still some in the biochemistry modules.

In the practicals I think the interaction with the lab demonstrators and lecturers is more personal than in a big lecture theatre and you can ask specific questions and see how the theory we've been learning applies in the lab and you have the demonstrators there to help if you get stuck.



### **Aoife, Biomedical Science**

At school I loved Human Biology and so choosing this degree meant that I could keep a focus on that area of study.

I looked at doing Biomedical Sciences at other universities but honestly, Lancaster was the place even before I had decided on the course. The greenery and the close knit feel of the campus really set in stone. I finally decided when I saw how highly acclaimed the Biomedical Science course was here and went to an open day.

As well as studying, Lancaster has loads of great societies. I'm currently in the Biology Society and the Pokemon Society. So, I've got the best of both worlds - an academic and leisure society. Having places to go that aren't to do with studying really makes it easier to relax. And actually it's at the Biology Society where I met my closest friends during the first night.

I hope to continue my studies in either Medicine or Biomedical Research. I love the environment that Lancaster provides; it has made me not want to leave just yet. Lancaster has given me lots of opportunity for discussions about my future and support regarding those aspirations in order for me to reach my goals. And for that, I am ever so grateful.



### **Katie, Biomedicine**

I chose Biomedicine because I wanted to gain deeper knowledge of the human body and have a greater understanding of health and disease. It's so interesting to learn in depth about what can go wrong in the body, how we diagnose this and new technology and innovations in the field.

I am loving my degree and the whole Lancaster experience. My degree is so exciting, every day I find myself fascinated by what I'm learning. And Lancaster itself is just the ideal place to study. Everyone is so friendly and helpful and there is such a variety of calm and quiet study spaces to utilise.

When I'm not studying, I'm a part of Pendle Netball Club, and the Taylor Swift Society! It's really fun! I've connected with so many lovely like-minded people, and it's great to have organised events to go to, making sure you take time away from studies and have a well earned break.

I'm hoping to do a Master's and go on to train to be a Genomic Counsellor. I've loved the genetics modules I've covered so far and can't wait to learn more and use the information I've gained to help people.



### **Jo, Ecology and Conservation**

Lancaster was the first university I visited that had a department devoted to the environment. The lecturers I met on my open and applicant days showed clear passion for both their subjects and teaching.

The links with the geography and environmental science departments allowed me to address the issues of conservation as a whole, drawing in understanding from other disciplines. The small cohort has been really beneficial over the years: I've loved being able to connect with my peers on fieldtrips and then continuing that in the classroom.

The progression of the modules has allowed me to fully appreciate the aspects of my course and what underpins them with modules like evolution allowing me to explore topics such as animal behaviour with a whole new understanding.

Lancaster's connection to the Lake District means that the field trips offered allow you to explore the environment on our doorstep alongside the trips abroad offered to locations such as Kenya. I personally enjoyed the opportunities the field trips gave me to get to know my course colleagues and felt that it really brought us together especially as we are a smaller degree scheme.

## A career in the making

One of our degrees will give you the skills to pursue a career in the biosciences, be that biology, ecology, biomedicine or biochemistry-focussed, and will give you the transferable skills valued by a wide range of future employers. In addition to subject-specific knowledge and understanding, you will learn time-management, organisation skills, team-working, presentation skills (both oral and written), as well as the numerical and analytical skills necessary for the degree, but equally applicable elsewhere.



### Examples of the types of careers pursued by our graduates

(some may involve additional study/training)

Biomedical Scientist (£28,888\*)  
 University Lecturer (£47,797\*)  
 Biotechnologist (£33,000\*)  
 Soil Scientist (£34k - £38k\*)  
 School Teacher (£36,015\*)  
 Microbiologist (£28,941\*)  
 Crop Scientist (£35,853\*)  
 Human Resource Manager (£50,205\*)  
 Molecular Biologist (£30,460\*)  
 Ecological Consultant (£35,217\*)  
 Marketing Officer (£29,138\*)  
 Forensic Scientist (£29,138\*)  
 Reserve Manager (£39,143\*)  
 Publishing Editor (£33,382\*)  
 Pharmaceutical Scientist (£38,929\*)  
 Food Technologist (£31,503\*)  
 Research Ecologist (£32,837\*)  
 Laboratory Technician (£23,837\*)

\*Average base salaries taken from [glassdoor.co.uk](https://www.glassdoor.co.uk) and correct at 06/06/2023.

Whatever your career aspirations may be, or even if you're still not quite sure, we're here to support you reach your goals. Tutorials and workshops on career planning are integral parts of your degree. You will undertake a module in employability skills, giving you excellent preparation for applying to graduate-level jobs and graduate schemes, and our dedicated Careers Service team are here to help you every step of the way. From CV writing to interviews and assessment centre preparation, they are able to offer you tailored and personalised support. What's more, they offer lifelong careers support to our graduates so, if you need us, we will always be here to help.

Lizzy graduated in 2022 with an MSci Biomedicine degree. She has gone on to pursue her dream of cancer research.



You did the (MSci) Integrated-Master's. Tell us a bit about that.

I was on the BSc but I had the grades to be able to convert, so for me it was a simple transition. Then that fourth year was just the best. It's 50/50 taught modules and a research project.

I thought about doing a separate Master's but it was an entire year, and I just wanted the academic year. It's the same modules that you do on the separate MSc as you do on the MSci. I think a lot of people think stand-alone Master's are better, and in some ways, they potentially are. But for me, I wanted to do a PhD, and so it was more about the experience. I had research experience and enthusiasm, and that was more important than whether I'd done it integrated or separately.

I really enjoyed my Integrated-Master's because you take the theory from the second- and third-year and apply it to research in those research modules. Learning about different research techniques and different equipment you'd use and why. I think it's set me up better for my PhD because I know a lot of people can go straight from a Bachelor's to a PhD, but I wouldn't have been ready.

At what point did you realise you wanted to do a PhD?

I really liked bringing together results and showing what it means, and I enjoyed writing my thesis, which people don't usually enjoy,

but I was so proud of myself, and I enjoyed talking about what I'd done. At that point, I realised I did want to do research. Then when the Lancaster University internships opened including the North West Cancer Research ones I submitted my application, and got a place. This was for eight weeks between third- and fourth-year and I loved it. As soon as it was done, I knew that I wanted to continue doing research, and that meant a PhD.

What programme are you on now?

It's called DiMeN – Discovery Medicine North and is a Doctoral Training Programme. They fund 40 students each year. I'm very lucky because I'm on an iCASE PhD, which means I'm partnered with industry, so I'm partnered with Cancer Research UK and AstraZeneca, in a little lab based in Cambridge and I will spend a minimum of three months across four years there. Which means I get to go down and use all their equipment. It also means they have a say in what I do, so I talk to them regularly. They're shipping me some Plasmid vectors and antibodies this weekend for me to use in some of my experiments.

## Fieldwork

**We take advantage of our natural surroundings – the living laboratory – to create amazing fieldwork experiences in addition to opportunities to travel the world with residential overseas field trips.**

### Spain

Home to over 1500 species of plants, 400 species of birds and 50 terrestrial mammals, Doñana National Park is one of the most important biodiversity hotspots in Europe. You will explore the diversity of the habitat and organisms living in the area, and you'll gain an understanding of the role of the National Park in conservation efforts and also practical experience of identification, critical observation and accurate recording of plants, invertebrates and animals.

Available to: Biology, Ecology and Conservation, and Zoology students

### Kenya

Based in the beautiful Rift Valley, you'll explore the staggering biodiversity of local aquatic and terrestrial ecosystems, at the same time considering how best to monitor and protect it. Working with experts in African ecology, you will gain first-hand experience of the ecological processes and conservation issues common to the tropics. Together, we will evaluate the challenging balance between tropical conservation and human activity.

Available to: Biology, Ecology and Conservation, and Zoology students



### Scotland

The ecology field course to Mull provides a chance to experience some amazing landscapes, from mountains to coasts, and to learn about the ecology of key plant and animal species. Each day you'll visit a variety of sites including mountains, rocky coastlines, fertile shell-sand beaches and heather moorland, with the aim of understanding the landscape, the place of key species within it, and conservation and management issues. You'll also get to know the spectacular flora of the region and you'll see a broad range of animal species such as red deer, white-tailed eagles, seals, mountain hares, hen harrier and a variety of seabirds.

Available to: Biology, Ecology and Conservation, and Zoology students



For more information visit [lancaster.ac.uk/biosciences](http://lancaster.ac.uk/biosciences)



### Switzerland

This is an intensive week-long residential field trip to south west Switzerland. You will collect significant amounts of field data and focus on one of six interconnected study themes, spanning: alpine climate and hydrology; glacial processes; alpine rivers; streams; soils; and ecosystems. You will gain an in-depth understanding of a particular thematic focus of alpine environments.

Available to: Ecology and Conservation students



### Eden Project

This is a new week-long residential field trip to explore the flora, fauna and soil ecology of Cornwall, and the conservation efforts underway to restore the natural habitats of this unique region. Guided by staff from Lancaster and the Eden Project, you will experience various activities focused on biodiversity and conservation, including a tour of the Eden Project and plant and nesting bird surveys, as well as studying examples of conservation in practice, such as 'A history of mining,' 'Lizard Peninsula coastline vs heathlands' and 'Roseland Peninsula marine habitats'.

Available to: Biology, Ecology and Conservation, and Zoology students

Image: Eden Cornwall ©Hufton+Crow





## World-class facilities

### Teaching labs

Our teaching laboratories are at the centre of your degree. They are where you will put into practice and test your knowledge from lectures and tutorials; they are the place where you'll learn to use the wide variety of equipment needed to understand the fundamentals of the science of life; they are where you'll hone skills in working as a team, planning and running experiments, and where you'll make lasting friendships with your fellow bioscience students.

### Bio-imaging

The cutting-edge microscopy in our bio-imaging suite puts you at the forefront of bioscience research.

Our facilities provide insights into biological questions ranging from human disease to global change biology, allowing you to study live cells over an extended period. This technique is often used by our integrated-Master's students in their fourth-year extended research projects.

### Cell biology

If you are interested in areas of research including gut biology, immunology, cancer, parasitology, tropical disease, plant biology and more, our cell biology facilities are an essential tool for developing your knowledge in these fields. For example, our flow cytometry instruments allow in-depth analysis of cell populations. You can use this to analyse cell cycle and cell death when investigating the efficacy of drug treatments in relation to cancer.

### DNA and protein analysis

Our teaching labs are equipped with facilities for DNA amplification as well as for the separation and imaging of DNA and proteins and measuring enzyme function. Understanding the function of the fundamental building blocks of life—DNA and proteins— is essential in diverse areas from Alzheimer's disease to global food security. Other techniques, such as the chromatographic separation of molecules and proteins or working with fluorescently-tagged proteins or DNA, could form part of your undergraduate research project.

### Model organisms

If you're interested in studying the effects of genetic variation on physiological, cellular and molecular processes involved in areas such as growth, development, ageing and neurobiology, our facilities provide the opportunity to explore this further. Model organisms include the plant *Arabidopsis thaliana*, the fruit fly *Drosophila melanogaster* and the nematode *Caenorhabditis elegans*.

### Soils and ecosystem ecology

Our Soils and Ecosystem Ecology Laboratory is where you will study novel aspects of plant-soil interactions, soil bio-geochemistry and their relationship to ecosystem ecology and conservation.

### Controlled environment plant growth

Our suite of purpose-built glasshouses, walk-in growth rooms and high-specification growth chambers provide facilities dedicated to a wide range of plant science and ecological teaching and research.

Your undergraduate project can take advantage of the range of the conditions available in these growth environments where climate, temperature, watering, light quality and day length can all be precisely controlled.



## Research with impact

**We talk a lot about ‘research-led teaching’ but what does that really mean? It means that the academics you will learn from, the people taking your labs and tutorials and standing at the front of the lecture theatres, are experts in their fields. Their research is shaping our understanding of the world and their work feeds into our degree programmes, ensuring that your education is informed by cutting-edge thinking.**

### Feed the world

Our researchers on the Realizing Increased Photosynthetic Efficiency (RIPE) programme have established a new way of sustainably increasing crop yields for farmers in the world’s poorest countries.

Our team worked on increasing their understanding of photosynthesis to pinpoint the best opportunities for boosting crop productivity without the need for a greater input of fertilizer and water. The study, led by **Professor Martin Parry** and **Professor Elizabete Carmo-Silva**, aims to increase the efficiency with which crops use sunlight to produce sugars.

Rubisco is a protein that acts as a catalyst,

converting carbon dioxide in the atmosphere into sugars. Our research team found that this protein was not as active in shaded leaves, meaning that the food crop would not reach peak productivity. However, in full and direct sunlight, activity increased in response to the additional energy available for carbon assimilation, allowing the crop to flourish fully.

This research is a fundamental first step to future-proof the world’s food supply.

### Neurological therapeutics

Dr Neil Dawson, Senior Lecturer in Biomedicine, researches how the genes that increase someone’s risk of developing neurodevelopmental conditions, including schizophrenia and autism, impact on the brain. A primary aim of his research is to develop new treatment options for people with these conditions. For example, people with schizophrenia often experience cognitive problems for which there are no effective treatments available, and there are currently no prescribed treatments to help people with autism manage their symptoms. Dr Dawson’s research team is particularly interested in repositioning drugs that are currently prescribed to treat other conditions, as these could be rapidly used to help people with these conditions if proven to be effective.

### Curtailling CoVID-19’s Impact on Society

In an effort to reduce the impact of the CoVID-19 pandemic, **Professor Muhammad Munir** and his team developed an inexpensive and rapid diagnostic platform that detects the virus involved, severe acute respiratory syndrome-coronavirus 2 (SARS-CoV-2), in under 30 minutes and a CoVID-19 vaccine.

The emergence of SARS-CoV-2 and its rapid spread among communities caused an unprecedented global pandemic within three months of the origin of the outbreak, leading to a global public health crisis. Critically, a large proportion (~80%) of CoVID-19 infected patients can show no or only moderate symptoms which led to the staggering increase in global infections. Rapid and timely detection of CoVID-19 patients at the point of care supports safe and early relaxation of control measures and can safeguard vulnerable and frail communities. The truly multidisciplinary diagnostic technology developed by our scientists incorporates artificial intelligence, image processing, electronics, and molecular virology to produce a battery-operated and hand-held smartphone-linked device that detects CoVID-19 patients at the point of need. Tele-medicine functionality records the mobility and tracing of CoVID-19 positive cases to inform the potential spread and transmission of the infection.

In a cross-border initiative focused on developing vaccines to defeat CoVID-19, our researchers developed a CoVID-19 vaccine that is easily scalable, safe and can be produced economically and quickly to potentially alleviate the impact of CoVID-19 around the globe. The vaccine, built upon non-human vectors, stimulates the respiratory system and thus strengthens its capacity to

protect the mucus membranes of the upper airways and stop infection and transmission.

Research in the Division of Biomedical and Life Sciences providing novel insights and translational solutions to living problems of society is at the forefront of the global fight against emerging and reemerging challenges in infectious diseases.

### Rats and Coral Reefs

**Professor Nick Graham** and our researchers are working to protect threatened environments from invasive predators, such as rats. They are having a damaging impact on the coral reefs that encircle and protect many remote tropical islands.

The research has shown that the rats, by feeding on bird eggs, chicks and even adult birds, have decimated seabird populations in 90% of the world’s temperate and tropical island groups, but these seabirds are important to these kinds of islands due to the nutrients in their droppings.

Our researchers were able to study the effects that rats have on the ecosystem of the Chagos islands in the central Indian Ocean. This was a perfect ‘laboratory’ setting due to some of the islands being rat-free, while black rats infest the others. This unusual situation enabled the researchers to show that the rats were harming not only the ecology of the islands, but the surrounding sea and adjacent coral reefs as well.

Not only did the rats have a detrimental effect on the fish life and algae, but also the way that the islands’ vulnerable ecosystems function. The results of the study showed that rat eradication should be a high priority on oceanic islands and could tip the balance for the future survival of coral reefs and their ecosystems.

## How you'll learn

**Our academics are leaders in their fields of research and deliver enthusiastic and engaging teaching through a range of methods.**

### Lectures

Lectures introduce the key issues and findings in each topic and are delivered by an expert in that particular area. They usually last 50 minutes and should be complemented by further independent study by reading relevant literature on the topic. We provide digital recordings of lectures for revision purposes and online reading lists of suitable books and journals that are available either digitally or in print from our library.

### Tutorials

Group tutorials are usually one-hour sessions where you will be encouraged to discuss your learning with fellow students, under the guidance of an academic tutor. During these in-depth study sessions, you will learn key skills that relate to your degree.

### Academic support

We foster a highly supportive learning environment, making sure you are fully supported to achieve your full academic potential. This includes assigning you an Academic Tutor with whom you will meet regularly throughout your degree to discuss your academic progress. You will have access to our Student Learning Developers, who offer workshops and advice on improving your academic skills.

### Practical classes

These are designed to help you discover the key principles underpinning the topic of study, whilst also developing your skills which you will be able to put to use throughout your degree and future career. Practical classes could include experiments conducted in our teaching laboratories, research projects, workshops, field trips and field and residential courses.

### Assessment

The assessment process varies across modules, but includes laboratory reports, essays, independent project reports, group presentations, multiple-choice tests and exams. Assessment is an on-going process, rather than being left solely until the end of the degree. This means we are able to offer feedback to you throughout your degree as part of your preparation for when modules are examined at the end of each year.

### Placement year

The opportunity to spend your third year working in a graduate-level role is a fantastic addition to your CV. Being able to demonstrate professional experience of working on a range of important and interesting projects, where you get to apply the skills you've learned in your first and second year, is invaluable when competing in the job market.

Not only that, but working in a professional role can help you to decide what you do, or don't, want to do once you graduate.

Placements are not guaranteed, and finding and securing a placement opportunity is down to you, just as it would be when applying for a graduate vacancy. But we will provide you with plenty of support and guidance in preparing you for interviews, writing your CV, applying for positions and even taking part in assessment centres.

We also have well established and long-standing links with industry which means that we'll have a number of placement opportunities just for Lancaster students.

### Study abroad opportunities

On our 4-year study abroad degrees you spend your third year studying at one of our international partner universities. Living in another country and studying your subjects from a different perspective offers considerable benefit both in terms of your understanding of the subject and your preparation for life after university.

Our Biology, Biochemistry, Biomedicine, Ecology and Conservation, and Zoology degree schemes offer you the opportunity to broaden your academic horizons by spending your third year studying abroad in either North America or Australasia. You'll have the opportunity to study a range of modules that complement those available in Lancaster. The year abroad will also provide you with an understanding of a different culture and society.

If you apply for a study abroad course, we will also consider you for the standard degree programme.

If, during your first or second year, you decide you no longer wish to study abroad, you can simply switch to the standard degree programme.

Please note that overseas opportunities may be impacted by international travel or Government border restrictions. Destinations are given as a guide only as the availability of places at overseas partners may vary year to year. For more information, please visit

[www.lancaster.ac.uk/study-abroad](http://www.lancaster.ac.uk/study-abroad)



## Biomedical Science Placements



**BSc Biomedical Science students are able to apply for one of a limited number of placements available in pathology laboratories at local NHS Trusts, or be supported to apply for placements in NHS pathology laboratories nationally.**

Alix took the opportunity to apply for her placement year between the second and third year of her degree in an NHS pathology laboratory. During her placement year, she completed an Institute of Biomedical training portfolio to demonstrate her skills.

“

Typically, placements are structured so that you can gain experience in each department before choosing a specialism where you will spend most of your year, but my placement was a little different ...

I spent a year in histopathology, with 6 months in the main laboratory and 6 months working on a molecular diagnostics project for lung cancer testing. I was a fully integrated member of the lab and trained in a wide range of techniques. I also got the opportunity to visit the molecular department at Birmingham University Hospital and attended seminars given by renowned leaders in cancer diagnostics.

I found my placement year extremely rewarding, and completing my portfolio puts me in a great position to get a job as a Biomedical Scientist – many students are employed part-time during the third year of their degree to enhance their skills further. It was great to use the knowledge I had gained during my degree to help patients receive life-changing diagnoses.

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## Our courses

### Entry requirements

Specific entry requirements are listed under each degree, however there are some common criteria required for each of our Biosciences programmes.

Example science subjects: Biology, Chemistry, Computing, Environmental Science, Geography, Geology, Human Biology, Mathematics, Physics and Psychology.\*

We require a GCSE in English Language (grade 4) and Mathematics (grade 5).

### Other qualifications

We welcome applications from students with other internationally recognised qualifications. For more information, please contact the Admissions Office directly on +44 (0)1524 592028 or [ugadmissions@lancaster.ac.uk](mailto:ugadmissions@lancaster.ac.uk)

\*For Biochemistry, Biomedical Science and Biomedicine: Biology, Chemistry, Mathematics, Physics.

For more information visit [lancaster.ac.uk/biosciences](http://lancaster.ac.uk/biosciences)



## Biology BSc Hons and MSci Hons

**C100 BSc Hons (3 years)**

**1M66 MSci Hons (4 years)**

**C105 BSc Hons (Study Abroad)**

**(4 years with Year 3 spent overseas at a partner university)**

**C104 BSc Hons (Placement Year)**  
**(4 years with Year 3 spent on placement)**

### Entry requirements for BSc Biology and BSc Biology (Placement Year)

A levels - AAB to include two science subjects  
BTEC - DDD<sup>1</sup>

International Baccalaureate - 35 points overall with 16 points from the best 3 Higher Level subjects including two science subjects at HL grade 6

### Entry requirements BSc Biology (Study Abroad) and MSci Biology

A levels - AAA to include two science subjects  
BTEC - DDD<sup>1</sup>

International Baccalaureate - 36 points overall with 16 points from the best 3 Higher Level subjects including two science subjects at HL grade 6

We offer you the flexibility to switch between these programmes subject to achieving the appropriate grades.

<sup>1</sup> Must include sufficient science and we require Distinctions in the majority of relevant science units. Please contact the Admissions Team for further advice.



Biology is the most flexible of the Bioscience degree programmes at Lancaster. You can choose to study topics from across the whole of biology or focus on the areas that reflect the way your interests and strengths grow and change over the course of your studies.

For example, topics you could choose to focus on include:

- + Biomolecular
- + Biomedicine
- + Cell biology
- + Environmental biology
- + Zoology

Taught by internationally renowned academics, you will develop the skills required to tackle some of the biggest challenges facing our planet, whether it's researching underlying scientific principles, the development of new treatments for disease or helping to protect endangered species.

In first year, you will gain a broad understanding of biology, from genetics and cell biology through to ecology and conservation biology, whilst having the opportunity to link these to key global challenges, such as the maintenance of biodiversity and human health. If you are on the Placement Year degree, in the first year

you will also be supported by our Careers & Placements Team with guidance and advice to prepare you for placements. Second and third years offer specialisation, allowing you to shape your own degree from a diverse range of in-depth theory and practical skills modules. You will also complete an independent research project on a topic selected from across the full breadth of biology.

In the fourth year of the MSci Biology degree you will take Master's-level modules and complete an extended research project.

Our optional international field trips provide exciting opportunities.

You may explore the Doñana National Park in the southwest of Spain, which is home to a plethora of plant, bird and animal species or visit the Eden Project in Cornwall to explore the conservation efforts underway to restore natural habitats of this unique region; you can visit some of the UK's last remaining natural habitats in rural Scotland, and witness a range of animals including red deer, osprey and golden eagles; or contribute to an expert-led study of the Rift Valley of Kenya, where you will evaluate the challenging balance between tropical conservation and human activity.

Selecting from our wide choice of optional modules gives you the flexibility to either follow a particular route, for example, environmental or biomedical, or to maintain a broad focus by choosing modules from across the breadth of biology.

### Year 1

#### Core modules

- + Biodiversity and Conservation
- + Cell Structure and Function
- + Evolutionary Biology
- + Experimental Design and Data Analysis
- + Genetics
- + Global Change Biology
- + Impact of Microbes
- + Molecules of Life
- + Skills in Life Sciences
- + Zoology

#### Optional modules

Select 5 from:

- + Anatomy and Tissue Structure
- + Aquatic Ecology
- + Biomedicine in Society
- + Biotechnology
- + Developmental Biology
- + Hormones and Development
- + Human Physiology
- + Infection and Immunity
- + Introduction to Epidemiology
- + Marine and Estuarine Biology
- + Protein Biochemistry
- + Spanish-Doñana Field Course  
OR Eden Project Field Course



## Year 2

### Core modules

- + Employability Skills

### Optional modules

- + Biochemical Techniques
- + Biochemistry
- + Bioinformatics
- + Cell Biology
- + Cell Biology Techniques
- + DNA Technology
- + Environmental Physiology
- + Evolution
- + Experimental Design and Analysis
- + Field Biology
- + Genetics
- + Medical Microbiology
- + Microbiological Techniques
- + Populations to Ecosystems
- + Practical Physiology
- + Principles of Biodiversity Conservation
- + Research Design and Delivery
- + Vertebrate Biology

## Year 3

### Core modules

- + Work Based Learning Reflection (Placement Year only)
- + Research Project

### Optional modules

- + Animal Behaviour
- + Biology of Ageing
- + Cancer
- + Cell Signalling
- + Cell Signalling, Transport and Disease
- + Clinical Immunology
- + Coral Reef Ecology
- + Environmental Plant Biology
- + Ethics in Biomedicine
- + Genetics
- + Host-Parasite Interactions
- + Innovation in the Biosciences
- + Issues in Conservation Biology
- + Medical Genetics
- + Molecular and Biochemical Parasitology
- + Neurobiology
- + New and Emerging Microbial Pathogens
- + Proteins: Structure, Function and Evolution
- + Scotland Field Course
- + Sustainable Agriculture
- + Tropical Biology and Conservation (Kenya Field Course)

## Year 4

### For Placement Year and Study Abroad Year students

- + The core and optional modules described above for Year 3

### Core modules

- + Extended Research Project
- + Project Literature Review

### Optional modules

- + Bioinformatics
- + Conservation Biology
- + Diseases of the Brain
- + Drug Development (From concept to clinic)
- + Emerging Therapeutics in Immunology
- + Using the National Vegetation Classification
- + Food Security, Agriculture and Climate Change

- + Habitat Management
- + Lake Ecology
- + Microbes and Disease
- + Molecular Basis of Cancer
- + Models of Disease
- + Wildlife Monitoring Techniques

## Flexibility and focus

Our Biology programmes allow you to study topics from across the whole breadth of the biosciences. You can take a flexible route through modules available in Years 2 and 3 or choose modules in a specific area of bioscience, for example, taking an environmental or biomedical route through your degree.

Year one	Years two and three
Core modules and your choice from among the optional modules	Biology: study topics from across the whole breadth of biology.
	Biomolecular: focus on topics in biochemistry and cell biology .
	Biomedical: focus on topics related to health and disease.
	Environmental Biology: focus on topics in organism-environment interactions.
	Zoology: focus on topics related to animal biology.
	Your own pathway building on your own interests and strengths.

# Biology with Psychology BSc Hons

**C1C8 BSc Hons (3 years)**

**C1C9 BSc Hons (Placement Year)**

**(4 years with Year 3 spent on placement)**

## BSc Biology with Psychology

A levels - AAB to include two science subjects  
BTEC - DDD in Applied Science<sup>1</sup>

## BSc Biology with Psychology (Placement Year)

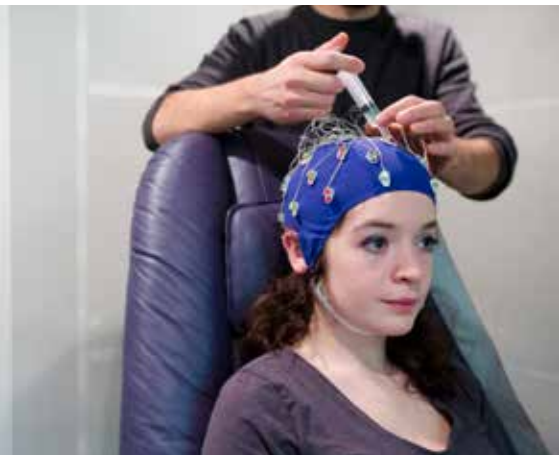
A levels - AAB to include two science subjects  
BTEC - DDD in Applied Science<sup>1</sup>

<sup>1</sup> Must include sufficient science and we require Distinctions in the majority of relevant science units. Please contact the Admissions Team for further advice.



Choose the areas of biology that interest you the most and link these studies to an understanding of human behaviour. You will gain an in-depth knowledge of biology and psychology, with the core modules focusing on understanding the biology that underpins human behaviour. The psychology modules are taught by experts from the Department of Psychology. This combination of disciplines provides you with an impressive mixture of scientific, analytical, communication and interpersonal skills that gives you an excellent basis for future employment.

In the first year your compulsory and optional modules will be split into thirds, with one third being psychology related and two thirds being biology related. If you are on the Placement Year degree, in the first year you will also be supported by our Careers & Placements Team with guidance and advice to prepare you for placements. In the second and third years, modules are designed to develop more specialist knowledge and to allow you to pursue your particular areas of interest. You will also take biology techniques modules, and in the final term of second year, begin a dissertation module. This involves an independent research project on a topic from within biology.



For more information visit [lancaster.ac.uk/biosciences](http://lancaster.ac.uk/biosciences)

## Year 1

### Core modules

- + Anatomy and Tissue Structure
- + Biomedicine and Society
- + Cell Structure and Function
- + Cognitive Psychology
- + Developmental Psychology
- + Evolutionary Biology
- + Experimental Design and Data Analysis
- + Genetics
- + Human Physiology
- + Infection and Immunity
- + Neuroscience
- + Personality and individual differences
- + Social Psychology
- + Skills in the Life Sciences

### Optional modules

- 1 module from:
- + Developmental Biology
  - + Hormones and Development

## Year 2

### Core modules

- + Cell Biology
- + Cognitive Psychology
- + Evolution
- + Developmental Psychology
- + DNA Technology
- + Employability Skills
- + Foundations of Cognitive Neuroscience
- + Genetics
- + Practical Physiology

## Year 3

### Core modules

- + Animal Behaviour
- + Cognitive Affective and Clinical Neuroscience
- + Neurobiology
- + Prozac Nation: Human Psychopharmacology
- + Research Project
- + Work Based Learning Reflection (Placement Year only)

### Optional modules

- 1 module from:
- + Biology of Ageing
  - + Cancer
  - + Ethics in Biomedicine
  - + Innovation in the Biosciences
  - + Pathobiology
- 1 module from:
- + Cell Signalling, Transport and Disease
  - + The Developing Mind
  - + The Lying Brain: an examination of hallucinations and delusions in normal, clinical and pathological populations
  - + Bewildering, bizarre, or just banal? Cognition in and out of the laboratory
  - + The Neuroscience of Typical and Atypical Social Development
  - + Topics in Clinical Psychology

## Year 4

### For Placement Year students

- + The core and optional modules described above for Year 3.



## Biochemistry BSc and MSci Hons

**C700 BSc Hons (3 years)**

**C706 MSci Hons (4 years)**

**C710 BSc Hons (Study Abroad)  
(4 years with Year 3 spent overseas at a partner university)**

**C707 BSc Hons (Placement Year)  
(4 years with Year 3 spent on placement)**

### BSc Biochemistry/ BSc Biochemistry (Placement Year)

A levels - AAB to include Chemistry and either Biology, Mathematics or Physics

BTEC - Considered alongside A level Chemistry

International Baccalaureate - 35 points overall with 16 points from the best 3 Higher Level subjects including 6 in HL Chemistry and 6 in one further HL subject from Biology, Mathematics or Physics

### BSc Biochemistry (Study Abroad)

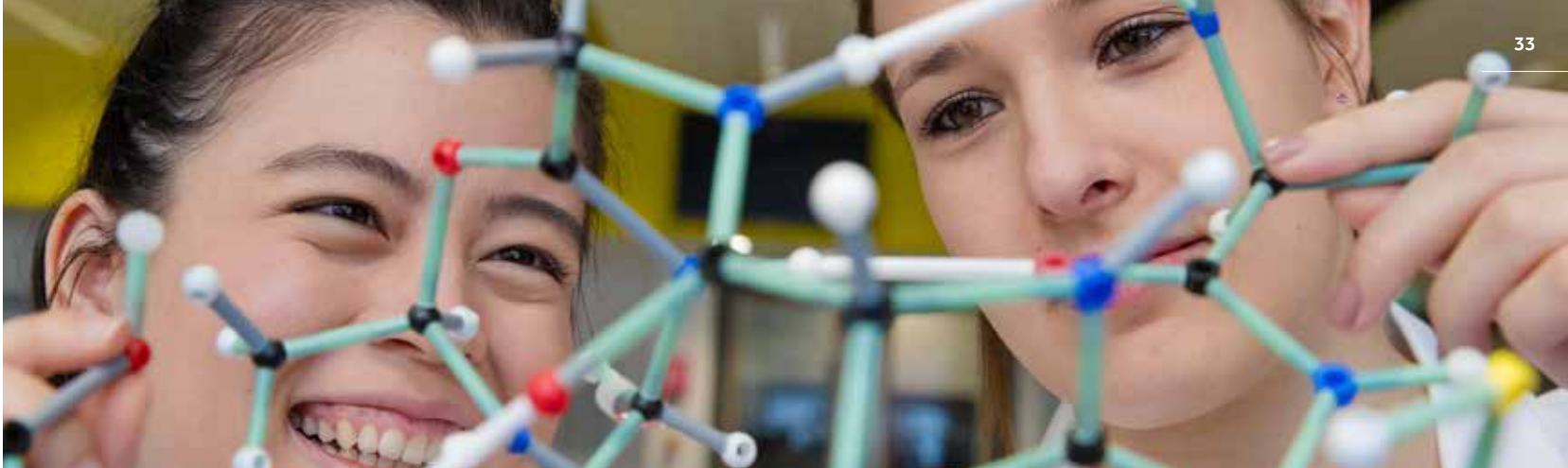
A levels - AAA to include Chemistry and either Biology, Mathematics or Physics

BTEC - Considered alongside A-level Chemistry

International Baccalaureate - 36 points overall with 16 points from the best 3 Higher Level subjects including 6 in HL Chemistry and 6 in one further HL subject from Biology, Mathematics or Physics

Biochemistry examines the structure and function of living organisms at the molecular level. It is an exciting and rapidly developing subject and an important investigative science within biology and medicine

Our three-year Biochemistry degree includes



core modules in biochemistry and chemistry combined with modules in related fields. Modules in chemistry are taught by experts from our Department of Chemistry.

In first year, you will study a range of core modules designed to provide you with a broad overview of biology and chemistry. Modules range from Protein Biochemistry, Biotechnology and Cell Structure and Function through to Thermodynamics of Chemical Processes and Organic Structure – all designed to give you a good foundation in key modern biochemical concepts. If you are on the Placement Year degree, in the first year you will also be supported by our Careers & Placements Team with guidance and advice to prepare you for placements. Alongside your core modules, you can use your three optional modules to specialise in one of our pathways:

- + Biochemistry
- + Genetics
- + Biomedicine

Throughout your degree, you can continue on your chosen pathway or you have the flexibility to change from the focused Biochemistry pathway to those specialising in Genetics or Biomedicine.

In the fourth year of the MSci degree you will take Master's-level modules and complete an extended research project.

### Year 1

#### Core modules

- + Biotechnology
- + Chemical Reaction Kinetics
- + Cell Structure and Function
- + Genetics
- + Impact of Microbes
- + Infection and Immunity
- + Molecules of life
- + Organic Reactivity and Mechanism
- + Organic Structure
- + Protein Biochemistry
- + Skills in the Life Sciences
- + Thermodynamics of Chemical Processes

#### Optional pathways

- + Biochemistry:
- + Atoms and Molecules
- + Coordination Chemistry
- + Spectroscopy and Analytical Chemistry

#### Biomedicine:

- + Anatomy and Tissue Structure
- + Human Physiology
- + Biomedicine and Society

#### Genetics:

- + Anatomy and Tissue Structure
- + Hormones and Development
- + Human Physiology

### Year 2

#### Core modules

- + Biochemical Techniques
- + Biochemistry
- + Bioinformatics
- + Cell Biology
- + Employability Skills
- + Genetics

#### Optional pathways

##### Biochemistry:

- + Applied Spectroscopy for Biosciences
- + Molecular Structure Determination
- + The Principles of Spectroscopy for Biological Sciences
- + DNA Technology
- + Microbiological Techniques

##### Genetics:

- + Medical Microbiology
- + DNA Technology
- + Microbiological Techniques

##### Biomedicine:

- + Medical Microbiology
- + Cell Biology Techniques

either

- + Microbiological Techniques
- + Practical Physiology



### Year 3

#### Core modules

- + Molecular and Biochemical Parasitology
- + Proteins: Structure, Function and Evolution
- + Research Project
- + Work Based Learning Reflection  
(Placement Year only)

#### Optional pathways

##### Biochemistry:

- + Advanced Spectroscopy: Theory & Applications
- + Advanced Techniques for Analytical Separations
- + The Chemistry of Biomedical Imaging

##### 2 modules from:

- + Clinical Immunology ◊
- + Genetics
- + Innovation in the Biosciences
- + Medical Genetics
- + Neurobiology ◊
- + Cell Signalling ◊
- + Cell Signalling, Transport and Disease ◊

◊ Choice must include at least one of these modules.

##### Biomedicine:

- + Cancer
- 2 module from:
- + Cell Signalling
  - + Cell Signalling, Transport and Disease
  - + Clinical Immunology
  - + Genetics
  - + Neurobiology
- and 1 module from:
- + Biology of Ageing
  - + Ethics in Biomedicine
  - + Environmental Pathogens
  - + Innovation in the Biosciences

##### Genetics:

- + Genetics
  - + Medical Genetics
- 2 modules from:
- + Biology of Ageing
  - + Cancer OR Innovation in the Biosciences
  - + Ethics in Biomedicine
  - + Neurobiology
  - + Cell Signalling

### Year 4

#### For Placement Year and Study Abroad Year students

- + The core and optional modules described above for Year 3

#### Only available to the Biochemistry pathway

- + Advanced NMR: Proteins, Solids and Imaging
  - + Advanced Topics in Biochemistry
  - + Extended Research Project
  - + Project Literature Review
- 2 modules from:
- + Bioinformatics
  - + Diseases of the Brain
  - + Drug Development (from concept to clinic)
  - + Emerging Therapeutics in Immunology
  - + Molecular Basis of Cancer



# Biomedical Science BSc Hons Institute of Biomedical Science (IBMS) Accredited degree

## B990 BSc Hons (3 years)

### BSc Biomedical Science

A levels - AAB to include Biology and either Chemistry, Mathematics or Physics

BTEC - DDD in Applied Science including sufficient Biology and Chemistry content

International Baccalaureate - 35 points overall with 16 points from the best 3 Higher Level subjects including 6 in HL Biology and 6 in one further HL subject from Chemistry, Mathematics or Physics

An Institute of Biomedical Science (IBMS) accredited degree with a clinical placement meets the requirements to register with the Health and Care Professions Council (HCPC). The IBMS is the professional body for those who work within the field of biomedical science.

This degree focusses on the key aspects of modern-day biomedicine, this degree is for students that are interested in studying human life processes within the context of health and disease. It's a highly-specialised programme and is taught jointly with clinical and biomedical staff from local hospitals. The course content is very structured, with the majority of modules being compulsory, and provides a thorough grounding in the theory and laboratory techniques associated with biomedical science.



You will be eligible to apply for a competitive placement within the NHS, and if successful, you will begin your placement following completion of your second year of studies, finishing at the end of August the following year. During this time you will complete a portfolio which is examined by the IBMS. Upon successful examination of your portfolio and successfully completing your degree, you will be awarded an IBMS Certificate of Competence and will be able to apply to the HCPC for registration as a Biomedical Scientist. Along with your degree studies this represents a core route to employment in the NHS as a Biomedical Scientist.

Our compulsory modules, which are at the heart of modern medical and health research, are taught with a particular emphasis on the molecules and mechanisms fundamental to life processes and how these are disrupted by disease. In the first year you'll study 15 modules covering a wide range of topics.

In the second year you'll move on to study subjects such as Biochemistry, Cellular Pathology and Medical Microbiology.

During your degree you will also complete an independent research project on a contemporary topic in biomedical science such as research into skin, colorectal, breast and prostate cancers, Alzheimer's and Parkinson's diseases, arthritis and other human conditions. In the third year you'll focus even more on aspects of human disease by taking modules in Cancer, Medical Genetics and Pathobiology.

### Year 1

#### Core modules

- + Anatomy and Tissue Structure
- + Biomedical Science in Practice
- + Biomedicine and Society
- + Biotechnology
- + Cell Structure and Function
- + Diagnosis in Biomedical Science
- + Experimental Design and Data Analysis
- + Genetics
- + Hormones and Development
- + Human Physiology
- + Impact of Microbes
- + Infection and Immunity
- + Molecules of Life
- + Protein Biochemistry
- + Skills in the Life Sciences

### Year 2

#### Core modules

- + Biochemistry
- + Cell Biology
- + Cellular Pathology
- + Clinical Biochemistry
- + Employability Skills
- + Genetics
- + Haematology and Transfusion Science
- + Medical Microbiology
- + Practical Physiology

### Year 3

#### Core modules

- + Cancer
- + Clinical Immunology
- + Medical Genetics
- + Pathobiology
- + Research Project

#### Optional Modules

2 modules from:

- + Cell Signalling
- + Cell Signalling, Transport and Disease
- + Genetics
- + Proteins: Structure, Function & Evolution
- + Molecular and Biochemical Parasitology
- + Neurobiology
- + Ethics in Biomedicine
- + Environmental Pathogens
- + Innovation in the Biosciences



# Biomedicine BSc and MSci Hons

**C701 BSc Hons (3 years)**

**C706 MSci Hons (4 years)**

**C709 BSc Hons (Study Abroad)  
(4 years with Year 3 spent overseas at a partner university)**

**C708 BSc Hons (Placement Year)  
(4 years with Year 3 spent on placement)**

## BSc Biomedicine/

## BSc Biomedicine (Placement Year)

A levels - AAB to include Biology and either Chemistry, Mathematics or Physics

BTEC - DDD in Applied Science including sufficient Biology and Chemistry content

International Baccalaureate - 35 points overall with 16 points from the best 3 Higher Level subjects including 6 in HL Biology and 6 in one further HL subject from Chemistry, Mathematics or Physics

## BSc Biomedicine (Study Abroad)/

## MSci Biomedicine/

## MSci Biomedicine (Study Abroad)

A levels - AAA to include Biology and either Chemistry, Mathematics or Physics

BTEC - DDD in Applied Science including sufficient Biology and Chemistry content<sup>2</sup>

International Baccalaureate - 36 points overall with 16 points from the best 3 Higher Level subjects including 6 in HL Biology and 6 in one further HL subject from Chemistry, Mathematics or Physics



<sup>2</sup>BTEC is only considered for entry to the BSc Hons Biomedicine variant. Subject to academic progression rules, students can transfer to the MSci Hons Biomedicine course.

This programme is for students interested in studying human life processes within the context of health and disease. While this programme is similar in many ways to the Biomedical Science degree, unlike that degree, Biomedicine offers flexibility to tailor your second- and third-year module choices to suit your interests. As such, it does not follow the prescribed curriculum of the IBMS accredited Biomedical Science degree.

In your first year you'll take 15 compulsory modules to ensure that you receive a thorough grounding in all areas of biomedicine. If you are on the Placement Year degree, in the first year you will also be supported by our Careers & Placements Team with guidance and advice to prepare you for placements. In the second year, you'll take four theory modules in core areas within biomedicine and have the flexibility to choose an additional four techniques modules covering key practical disciplines. During your degree you will also complete an independent research project on a contemporary topic in biomedicine.

In the third year, you'll take two compulsory modules but, again, you also have the flexibility to tailor your degree to your own interests through the choice of your remaining modules.

Our MSci students undertake Master's-level modules in fourth year and complete an extended research project.

## Year 1

### Core modules

- + Anatomy and Tissue Structure
- + Biomedical Science in Practice
- + Biomedicine and Society
- + Biotechnology
- + Cell Structure and Function
- + Diagnosis in Biomedical Science
- + Experimental Design and Data Analysis
- + Genetics
- + Hormones and Development
- + Human Physiology
- + Impact of Microbes
- + Infection and Immunity
- + Molecules of Life
- + Protein Biochemistry
- + Skills in the Life Sciences

## Year 2

### Core modules

- + Biochemistry
- + Cell Biology
- + Employability Skills
- + Genetics
- + Medical Microbiology

### Optional modules

1 module from:

- + DNA Technology
- + Haematology and Transfusion Science

2 modules from:

- Biochemical Techniques
- + Clinical Biochemistry
- + Cell Biology Techniques
- + Cellular Pathology
- + Bioinformatics

1 module from:

- + Microbiological Techniques
- + Practical Physiology

## Year 3

### Core modules

- + Cancer
- + Medical Genetics
- + Research Project
- + Work Based Learning Reflection (Placement Year only)

### Optional modules

4 modules from:

- + Cell Signalling
- + Cell Signalling, Transport and Disease
- + Clinical Immunology
- + Environmental Pathogens
- + Ethics in Biomedicine
- + Genetics
- + Molecular and Biochemical Parasitology
- + Neurobiology
- + Pathobiology
- + Proteins: Structure, Function and Evolution

## Year 4

### For Placement Year and Study Abroad Year students

- + The core and optional modules described above for Year 3

### Core modules

- + Extended Research Project
- + Project Literature Review

### Optional modules

- + Bioinformatics
- + Diseases of the Brain
- + Drug Development (from concept to clinic)
- + Emerging Therapeutics in Immunology
- + Microbes and Disease
- + Models of Disease
- + Molecular Basis of Cancer



## Ecology and Conservation BSc and MSci Hons

**C180 BSc Hons (3 years)**

**C183 BSc Hons (Study Abroad) (4 years with Year 3 spent overseas at a partner university)**

**C181 BSc Hons (Placement Year) (4 years with Year 3 spent on placement)**

**OX48 MSci Hons (Professional Experience) (4 years with a 7 week placement in Year 4)**

**BSc Ecology and Conservation/  
BSc Ecology and Conservation  
(Placement Year)**

A levels - ABB to include two science subjects  
BTEC - DDM<sup>1</sup>

International Baccalaureate - 32 points overall with 16 points from the best 3 Higher Level Subjects including two science subjects at HL grade 6

**(Study Abroad)/MSci Ecology and  
Conservation (Professional Experience)**

A levels - AAB to include two science subjects  
BTEC - DDD<sup>1</sup>

International Baccalaureate - 35 points overall with 16 points from the best 3 Higher Level Subjects including two science subjects at HL grade 6

<sup>1</sup>Must include sufficient science and we require Distinctions in the majority of relevant science units. Please contact the Admissions Team for further advice.

Learn how organisms interact with each other and their environment and discover the impact of human activity in a series of exciting field-based and lab-taught modules.

Our renowned researchers deliver an exceptional training programme that provides a thorough grounding in ecological theory and practice, combining lectures, practicals, fieldwork and small-group tutorials. You will gain a deep understanding and hands-on experience of how these principles are applied in the study and conservation of species and the ecosystems in which they live.

Your first year will begin with a rounded introduction to ecology and conservation biology. You will participate in the field course in southern Spain or Cornwall, and you will study a series of modules in ecology, evolutionary biology and conservation. If you are on the Placement Year degree, in the first year you will also be supported by our Careers & Placements Team with guidance and advice to prepare you for placements. Specialisation from the second year onwards allows you to choose topics that match your interests. The wide selection of modules will equip you with a range of ecology, conservation biology and practical skills. In third year, you will carry out an independent research project.

Our MSci degrees offer Master's-level modules in the fourth year along with an extended research project. The Professional Experience variant includes a seven week placement.

Throughout your degree, you will have the opportunity to experience a range of exciting fieldwork modules and residential courses. You will explore the Doñana National Park in the southwest of Spain, which is home to a plethora of plant, bird and animal species or visit the Eden Project in Cornwall to explore the conservation efforts underway to restore natural habitats of this unique region; you can visit some of the UK's last remaining natural habitats in rural Scotland, and witness a range

of animals including red deer, osprey and golden eagles; contribute to an expert-led study of the Rift Valley of Kenya, where you will evaluate the challenging balance between tropical conservation and human activity; or gain an in-depth understanding of alpine environments in Switzerland.

<sup>°</sup> Depending on whether you have GCSE Mathematics grade A/7 or above, you will be required to take a numerical skills module in order to ensure you have the necessary knowledge to succeed in year two and beyond.

\* Dissertation with Work Placement available to C180 and OX48 students only.





### Year 1

#### Core modules

- + Aquatic Ecology
- + Biodiversity and Conservation
- + Environmental Processes and Systems
- + Evolutionary Biology
- + Global Change Biology
- + Global Environmental Challenges
- + Spanish-Doñana Field Course OR Eden Project Field Course
- + Zoology

#### Optional modules

- + Numerical Skills I\*
- + Up to 5 further optional modules in another science subject

### Year 2

#### Core modules

- + Beyond LEC? Steps to Career Success
- + Experimental Design and Analysis
- + Field Biology
- + Populations to Ecosystems
- + Principles of Biodiversity Conservation
- + Research Design and Delivery

#### Optional modules

- + Environmental Physiology
- + Evolution
- + Introduction to Eco-Innovation
- + Soil Science
- + Spatial Analysis and Geographic Information Systems
- + Vertebrate Biology

### Year 3

#### Core modules

- + Dissertation OR Dissertation with Work Placement\*
- + Work Based Learning Reflection Placement Year only)

#### Optional modules

- + Alpine Environmental Processes Field Course
- + Animal Behaviour
- + Climate and Society
- + Coral Reef Ecology
- + Environment, Politics and Society in Amazonia
- + Environmental Plant Biology
- + Environmental Remote Sensing and Image Processing
- + Food and Agriculture in the 21st Century
- + Host-Parasite Interactions
- + Issues in Conservation Biology
- + Lakes, Rivers and Estuaries
- + Scotland Field Course
- + Sustainable Agriculture
- + Tropical Biology and Conservation (Kenya Field Course)
- + Water Resources Management

### Year 4

#### For Placement Year and Study Abroad Year students

- + The core and optional modules described above for Year 3

#### For Professional Experience students

##### Core modules

- + Professional Experience Dissertation
- + Professional Experience Placement

##### Optional modules

- + Conservation Biology
- + Contaminated Land and Remediation
- + Data Analysis and Interpretation
- + Habitat Management
- + Soil Science
- + Sustainable Soil Management

# Zoology BSc Hons

## C300 BSc Hons (3 years)

## C304 BSc Hons (Study Abroad) (4 years with Year 3 spent overseas at a partner university)

## C302 BSc Hons (Placement Year) (4 years with Year 3 spent on placement)

### BSc Zoology/

### BSc Zoology (Placement Year)

A levels - AAB to include two science subjects  
BTEC - DDD<sup>1</sup>

International Baccalaureate - 35 points overall  
with 16 points from the best 3 Higher Level  
subjects including two science subjects at HL  
grade 6

### BSc Zoology (Study Abroad)

A levels - AAA to include two science subjects  
BTEC - DDD<sup>1</sup>

International Baccalaureate - 36 points overall  
with 16 points from the best 3 Higher Level  
subjects including two science subjects at HL  
grade 6

<sup>1</sup>Must include sufficient science and we  
require Distinctions in the majority of relevant  
science units. Please contact the Admissions  
Team for further advice.

Our Zoology degree covers a broad range of  
topics relevant to the study of animal biology.  
You will learn about taxonomy and the diversity  
of animal life, cellular processes and physiology,  
animal behaviour, through to evolution, ecology  
and conservation. The degree is flexible, allowing  
you to focus on the topics that interest you the

most.

The first year of the degree provides a broad  
foundation, with additional options for study either  
in other areas of biology or in different subjects.

If you are on the Placement Year degree, in  
the first year you will also be supported by our  
Careers & Placements Team with guidance and  
advice to prepare you for placements. Year two  
includes modules in evolution and vertebrate  
biology, as well as core skills modules introducing  
you to research techniques in both the laboratory  
and the field. Year two options range from cell  
biology to conservation. In year three, you will take  
a core module in animal behaviour and complete  
your own independent research project. There  
are a wide range of specialist options, including  
Neurobiology, Coral Reef Ecology and Host-  
Parasite Interactions.

Throughout your degree, you will have the  
opportunity to experience a range of exciting  
fieldwork modules and residential courses. You  
will explore the Doñana National Park in the  
southwest of Spain, which is home to a plethora  
of plant, bird and animal species or visit the Eden  
Project in Cornwall to explore the conservation  
efforts underway to restore natural habitats of  
this unique region; you can visit some of the UK's  
last remaining natural habitats in rural Scotland,  
and witness a range of animals including red deer,  
osprey and golden eagles; or contribute to an  
expert-led study of the Rift Valley of Kenya, where  
you will evaluate the challenging balance between  
tropical conservation and human activity.

During your research project, you will benefit  
from the experience of our internationally  
renowned academic staff, and there are additional  
opportunities to carry out your project with a  
commercial partner through our Enterprise and  
Business Partnerships team.



### Year 1

#### Core modules

- + Anatomy and Tissue Structure
- + Biodiversity and Conservation
- + Cell Structure and Function
- + Developmental Biology
- + Evolutionary Biology
- + Genetics
- + Infection and Immunity
- + Hormones and Development
- OR Spanish-Doñana Field Course
- OR Eden Project Field Course
- + Marine and Estuarine Biology
- + Zoology

#### Optional modules

- + You may select up to 5 modules from  
another science subject

### Year 2

#### Core modules

- + Beyond LEC? Steps to Career Success
- + Evolution
- + Experimental Design and Analysis
- + Field Biology
- + Research Design and Delivery
- + Vertebrate Biology

#### Optional modules

- + Cell Biology
- + Cell Biology Techniques
- + DNA Technology
- + Environmental Physiology
- + Genetics
- + Populations to Ecosystems
- + Principles of Biodiversity Conservation

### Year 3

#### Core modules

- + Animal Behaviour
- + Dissertation
- + Work Based Learning Reflection  
(Placement Year only)

#### Optional modules

- + Biology of Ageing
- + Cell Signalling, Transport and Disease
- + Coral Reef Ecology
- + Environmental Plant Biology
- + Genetics
- + Host-Parasite Interactions
- + Innovation in the Biosciences
- + Issues in Conservation Biology
- + Neurobiology
- + Scotland Field Course
- + Sustainable Agriculture
- + Tropical Biology and Conservation  
(Kenya Field Course)

### Year 4

#### For Placement Year and Study Abroad Year students

- + The core and optional modules described  
above for Year 3



## Open Days

### Open Days are your opportunity to come and meet us in person.

As you go through the process of deciding what you want to study and what kind of university you want to study at, at some point you do need to go and visit them. There is no substitute for coming to visit our beautiful campus, to check out our award-winning accommodation and generally get a feel for the place. You'll find us to be a welcoming, inclusive community with a fully accessible campus.

It's also a chance to meet our academic team and students studying Sports and Exercise Science.

#### Dates for the Open Days are:

Saturday 1st July 2023

Saturday 15th July 2023

Saturday 16th September 2023

Saturday 14th October 2023

Register your interest here:



#### Campus Tours

Outside of the Open Days, we organise regular campus tours to give you a flavour of life at Lancaster. You can book onto Open Days and Campus Tours at [www.lancaster.ac.uk/visitus](http://www.lancaster.ac.uk/visitus)

#### Offer Holder Events

If you receive an offer to study at Lancaster University, you will be invited to come to an Offer Holder Event. These are very different

to Open Days, where the focus is more on getting a general feel for the University. If an Offer Holder Event has one purpose it is to give a snapshot of what it is actually like to be a student studying at Lancaster University. So, your Offer Holder Event might comprise a laboratory practical, a real lecture, a seminar or a tutorial. It will be hosted not only by our academic team, but by our students. Who knows, you might well end up meeting your fellow first-year students for the very first time.

#### Visiting us

Lancaster is very well served by road, rail and air networks and is nearby to major cities such as Manchester and Liverpool. More information about visiting the University can be found at [www.lancaster.ac.uk/travel](http://www.lancaster.ac.uk/travel)

Please note: Visits to campus for Open Days, Campus Tours, and Offer Holder Events may be subject to restrictions if government guidance changes. Please visit [www.lancaster.ac.uk/visitus](http://www.lancaster.ac.uk/visitus) for up to date information.

#### Disclaimer

The information provided in this brochure relates primarily to 2024/25 entry to the University and every effort has been taken to ensure the information is correct at the time of printing in June 2023. The University will use all reasonable effort to deliver the course as described but the University reserves the right to make changes after going to print. You are advised to consult our website at [www.lancaster.ac.uk/study](http://www.lancaster.ac.uk/study) for up-to-date information before you submit your application.

Further legal information may be found at: [www.lancaster.ac.uk/compliance/legalnotice](http://www.lancaster.ac.uk/compliance/legalnotice)







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Scan for our subject film.