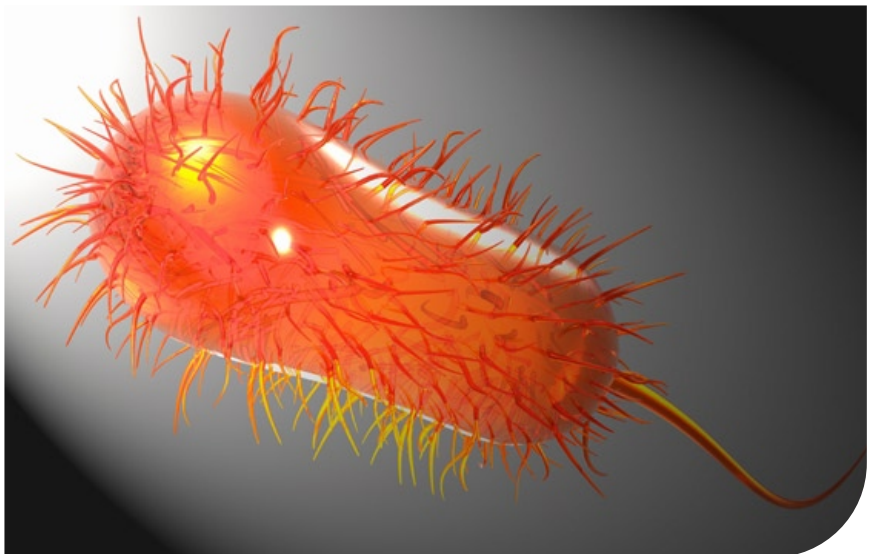


Biology & Biological Sciences

Undergraduate Prospectus



Study biology at Lancaster University

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Welcome To Lancaster

Why study biology?

Biology plays key roles in many aspects of modern society. At a fundamental level, biology can help us unravel the big question of how life on Earth began, and how it evolved from those very early beginnings into the astonishing variety and complexity of organisms and ecosystems that we are familiar with today. But biology also is at the core of many of the important functions of human society. In medicine, knowledge of the biochemistry, molecular biology and physiology of human cells and tissues enables the development of treatments to prevent illness and disease, whether it's a new drug or an application of stem cell technology. Our ability to continue to produce the food that we eat in sufficient quantities without ruining our countryside means that we need a much better understanding of plant and animal biology and ecology. And in a wider sense, biology is also central to our understanding of the effects of climate change and human activity on the Earth's biodiversity.

Studying at Lancaster University, which is ranked 9th in the UK according to The Complete University Guide for 2016 and which is in the top 1% of universities in the world, provides you with the opportunity to study all this and more. You will receive a thorough grounding in the principles and issues of biology, and training in the key techniques associated with modern biological research.

Biology at Lancaster was rated 9th in the UK in the 2016 Guardian University Guide. We are committed to maintaining a strong and varied research base through the activities of two sister Departments, Biomedical and Life Sciences (BLS) and the Lancaster Environment Centre (LEC). Our world-class research includes many diverse aspects of biology, from investigating the

way drought and pollution affects crop plants, to the molecular mechanisms involved in the development of Alzheimer's disease, cancer and arthritis.

The excellence of the Biology & Biological Sciences degrees we offer at Lancaster is built upon:

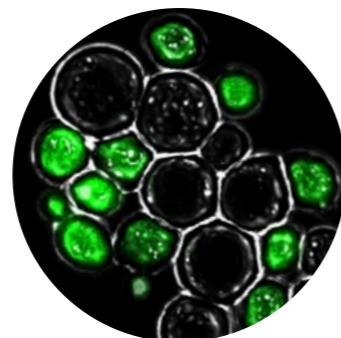
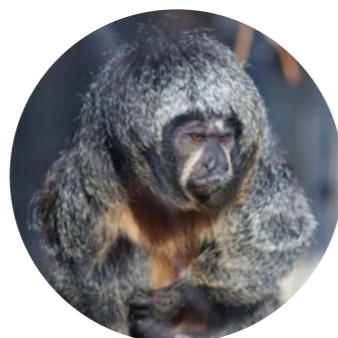
Flexibility. The wide choice of study options we offer within our Biology and Biological Sciences degree programmes allows you to either specialize in one particular area of the subject or to maintain a broad interest across a range of topics.

The emphasis given to practical study. Doing science is just as important as learning the facts and figures. Around 50% of the contact time on our degrees is used for practical and workshop activities in the laboratory or the field, or in PC labs and classrooms. We also run optional residential field courses in years 1-3 which are available to students on our Biology degree programmes on a competitive basis.

The quality of our teaching. We received the highest possible score of 'Full Confidence' in the latest University teaching assessment. Our staff are highly dedicated and experienced, are sympathetic to student needs and appreciate the wide range of skills and experience of the students who join us.

Our links to business and industry. Work with organisations outside the University during your degree, for example as part of your dissertation project or as an intern.

Our study abroad options. Spend the second year of your Biological Sciences degree working at a partner University in North America or Australasia, gaining exciting and valuable experience of a different social and academic environment.





Be Taught By The Best:

Research excellence in biology at Lancaster University

The biology degrees at Lancaster are taught by staff from two sister Departments, Biomedical and Life Sciences (BLS) and the Lancaster Environment Centre (LEC). The expertise of our staff in BLS and LEC spans the full breadth of biology, from biomedicine and biochemistry through to environmental change, biodiversity and ecosystem function, sustainable agriculture, and sustainable resource management. Staff from all of these areas could contribute to your degree, depending on the modules you opt to take. This diverse suite of skills and knowledge make Lancaster a really exciting learning environment.



BLS and LEC both have an established history of high quality research and continue to further expand their research portfolio through an on-going programme of new staff appointments in developing areas of biomedical and organismal biology. Due to our high level of research activity, students on our Biology and Biological Sciences degree programmes benefit from research-led teaching and exposure to state-of-the-art facilities and cutting-edge research expertise during their projects.

The research activities in BLS are directed toward understanding basic cellular and physiological mechanisms that underpin disease states. This is divided into three research areas:

1 Ageing and neurodegenerative disease – research into the mechanisms of ageing aimed at finding new biomarkers and drugs for diseases like Alzheimer's and Parkinson's disease;

2 Cancer and DNA damage – research directed towards understanding the cellular and molecular basis of cancer and the underlying causes of malignancies such as colorectal, prostate and skin cancer;

3 Parasitology and microbiology – research into tropical infectious diseases, their insect vectors, and environmental exposure to potentially harmful micro-organisms.

Funding for research in BLS comes from a variety of sources including the UK Research Councils, The Wellcome Trust and other medical charities, and industry.



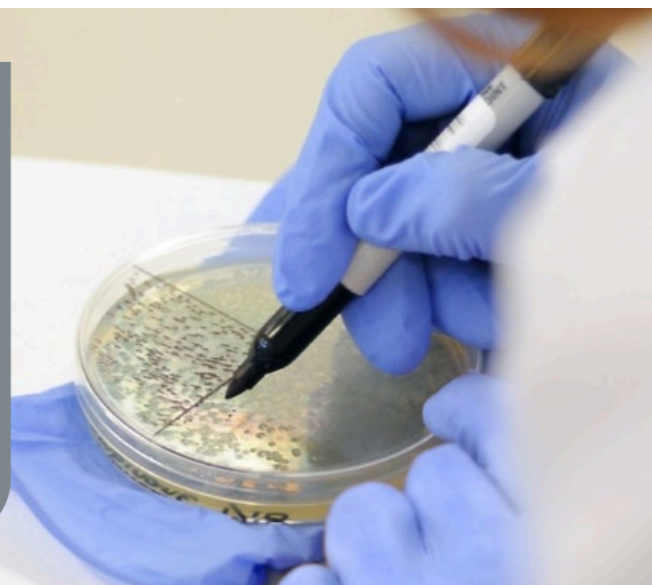
LEC is one of the largest collections of environmental researchers in Europe. Its mission is to address today's key challenges, in terms of the environment and sustainability, focusing on research with real impact and that links directly with end-users. Research in LEC spans several disciplines, but in biology, our staff are leading the international research agenda in several important areas, such as the impacts of climate change on biodiversity and conservation to the development of sustainable crop production systems. This is underpinned by our expertise in areas ranging from intracellular signalling in plants to behavioural ecology in birds and tropical forest biodiversity. Funding for biology research in LEC comes from the UK Research Councils, DEFRA, the European Union, DFID and various other national and international partners.



New BLS/LEC teaching laboratories, opened in Spring 2015

Studying **biology**

Our Biology and Biological Sciences degrees will, of course, provide you with a wealth of theory and factual information about the subject. But in addition, our programmes place a strong emphasis on providing you with a range of generic transferable skills that prepare you for fulfilling professional careers in the field of biology, or indeed beyond.



The **Degree** Programmes



Therefore, if you are interested in exploring biology from how animals and plants function as organisms, to their biodiversity and conservation, then Biology may be your best choice. Alternatively, if you would like to choose from a broad range of life sciences topics ranging from the molecular and cellular to biodiversity and environmental physiology then Biological Sciences maybe more appropriate. However, if at any time during your first year you realise you've made the wrong choice, we offer you the flexibility to move between these degree programmes. You can also move to one of our more specialist degrees, such as Biomedicine, Biochemistry, Environmental Biology or Ecology and Conservation (see page 17).

In both cases, you will be taught by staff from both Biomedical and Life Sciences (BLS) and the Lancaster Environment Centre (LEC), providing you with a broad range of subjects from which to choose from across the full breadth of biology. There is something here for everyone!

Biology or Biological Science?

Our different degree programmes provide you with a range of options to study biology at Lancaster University depending on where your interests lie and the career pathway that you ultimately wish to follow. So what's the difference?

Biology

Our Biology degree is designed for students who want to understand whole organisms and how they interact with the environment. You can choose from a wide range of modules, focusing on evolution, zoology, genetics, microbiology, and biodiversity and conservation. You will study biological principles and current issues, and learn key practical techniques. Optional modules are available in topics such as development, molecular and cellular function, or marine and estuarine biology. You will also have the opportunity to take part in a number of residential field courses in the UK, Spain, Brazil, and Africa or South East Asia.

Biological Sciences

Our Biological Sciences degree is suitable for students with a broad interest in the science of life, and allows you to tailor your degree to match your own interests. You will receive a thorough grounding in the principles and issues of biology, and practical training in the key techniques associated with modern biological research. The course is highly flexible and offers you a diverse choice of modules in topics ranging from genetics, cell biology and biochemistry, through physiology, biomedicine and microbiology, to evolution and biodiversity.

Opportunities for study abroad

The Biological Sciences Study Abroad degree allows you to spend your second year at one of our partner universities. These international options are still 3-year courses, with marks from the year abroad counting towards your final degree – so this is not an additional year, but one which offers exciting academic and social opportunities within a 3-year programme.

Integrated masters

The Biology and Biological Sciences M.Sci. degrees are 4-year integrated Masters courses allowing you to undertake the same taught modules as those available on the 3-year B.Sc. variant of the course, but with the added benefit of a fourth year consisting of Masters level taught modules and an extended research project. This additional year can really make the difference in terms of your employability, or give you the experience to decide whether a research career might be for you. The practical skills students on this course develop will stand you in good stead when applying for subsequent research-based careers (particularly Ph.D. posts). And unlike studying for a separate Masters degree after a standard three year B.Sc., the M.Sci. course is fully funded through the tuition fee loan system. But if you decide after three years that you don't want to complete the M.Sci. course, you can stop and graduate with a B.Sc.



Biology

(B.Sc. Honours and M.Sci.) degree programmes

The Biology degrees at Lancaster are aimed at students with an interest in organismal biology. The degree examines the functioning of organisms, including how they interact with each other and with their environment, and how organisms are affected by the key global environmental challenges in the 21st century including human activities. You will receive a thorough grounding in biological principles and practical techniques following which students are able to specialize through their choice of option modules available in the degree. Lectures, practicals and workshops are complimented by field excursions and residential field courses, both in the UK and overseas (see page 10), and by work experience.

The degree begins with an integrated first year, which combines introductory modules in genetics, development and cell biology with modules in ecology, conservation biology, and environmental biology including a residential field course in southern Spain. In year two, you can start to specialise in the areas of organismal biology that most interest you by choosing from in-depth theory modules drawn largely from topics focusing on whole organism level responses as well as a non-residential field biology course. At the end of the year, there is also a residential field course in Scotland. In addition, you take a series of practical skills modules that prepare you for your dissertation research project. You can specialise further if you wish in year three. Third year modules include optional field courses covering tropical biology in either Africa or South East Asia, and conservation in the Brazilian Amazon, and you will complete an independent research project.



All our research projects are supervised by academic staff from the Lancaster Environment Centre, but students have the option of applying to do their project while on work placement with a commercial partner or external organisation in the conservation sector. Students can select a laboratory-based project using the state-of-the-art research facilities on campus. Alternatively, Lancaster's location close to a diverse range of both terrestrial and aquatic habitats such as the Lake District and Morecambe

Bay, makes a field-based research project an exciting option. There are additional opportunities to gain research experience on our M.Sci. Biology degree. The first three years of this degree follow the B.Sc. programme, but you will continue into a fourth year, during which you are able to select from a wide variety of taught biology masters-level modules, and you will undertake an extended research project. There are also opportunities to carry out third year projects at a European University via the Erasmus scheme.

Degree structure:

Year 1

Core modules:

- Aquatic Ecology
- Biodiversity & Conservation
- Biotechnology
- Cell Structure & Function
- Evolutionary Biology
- Genetics
- Global Change Biology
- Global Environmental Challenges
- Impact of Microbes
- Molecules of Life
- Skills in Biomedical & Life Sciences
- Zoology

Optional modules: two modules from

- Developmental Biology
- Marine & Estuarine Biology
- Spanish Field Course

Year 2

Optional modules: five modules from

- Cell Biology
- Developmental Biology
- Environmental Physiology
- Evolution
- Field Biology
- Genetics
- Microbiology
- Populations to Ecosystems
- Principles of Biodiversity Conservation
- Vertebrate Biology

Year 3

Core modules

- Research project

Optional modules: seven modules from

- Animal Behaviour
- Biology of Ageing
- Brazil Field Course
- Cell Cycle and Stem Cells
- Cell Signalling, Transport & Disease
- Conservation in Practice
- Ecophysiology of host-pest interactions
- Environmental Pathogens
- Environmental Plant Biology
- Frontiers in Ecology and Evolution
- Genetics
- Global Change Biology: Challenges and Solutions
- Insect Biology & Conservation
- Issues in Conservation Biology
- Life in Extreme Environments
- Neurobiology
- Scotland Field Course
- Sustainable Agriculture
- Tropical Biology Field Course
- Tropical Diseases

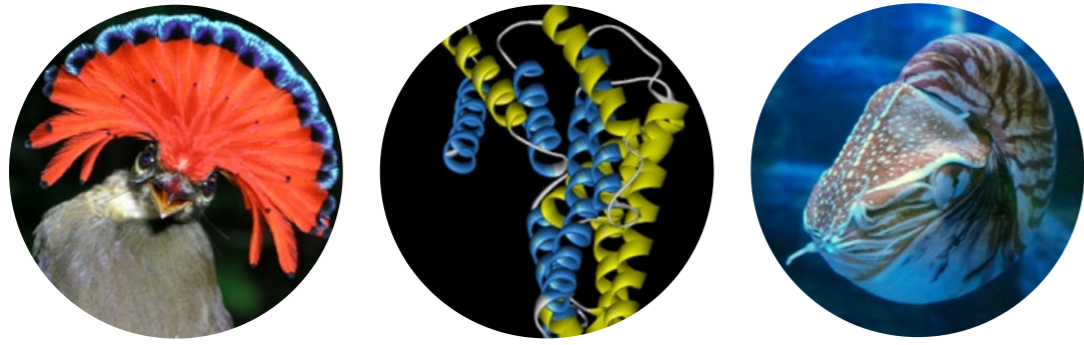
Year 4

Core module

- Extended research project

Optional modules

- Four masters-level modules selected from a wide range available.



Biological Sciences

(B.Sc. Honours and M.Sci.) degree programmes

The Biological Sciences degrees at Lancaster are aimed at students with a broad interest in the science of life, and allow you to tailor your degree to match your own interests. You will receive a thorough grounding in the principles and issues of biology, and practical training in the key techniques associated with modern biological research. The course is highly flexible in all three years of the degree (four years in the case of the M.Sci.), and offers you a diverse choice of modules in topics ranging from genetics, cell biology and biochemistry, through physiology and biomedicine, to ecology, and conservation. Modules are assessed through a combination of course work, end-of-module tests and summer examinations.

The degree begins with a wide range of introductory-level modules in the first year. You can choose to follow linked themes of modules throughout the year, or mix-and-match to suit your own requirements. At Lancaster, you can also take up to one third of your first year modules in a department outside of your main subject, so if you want to study computing, business, politics, art or philosophy – you can. You begin to specialise more in the second year, choosing four in-depth theory modules alongside a series of practical skills modules that prepare you for your dissertation research project. Students on our Study Abroad programme spend their second year at a University in North America or Australia. There are a wide variety of specialist third year modules for you to select from, and you will complete an independent research project.

Students can select research projects from across the full breadth of biology. Our high level of research activity and funding means that you have the opportunity to undertake your project in a cutting edge research laboratory using the latest technology or to undertake



a field-based research project. All our research projects are supervised by academic staff from Lancaster University, but there are also opportunities to apply to do your project while on work placement with a commercial partner or external organisation in the environmental sector. Students can also gain additional research experience on our M.Sci. Biological Sciences degree. The first three years of this degree follow the

B.Sc. programme, but you will continue into a fourth year, during which you are able to select from a wide variety of taught biology masters-level modules, and you will undertake an extended research project.

Course Options: Students may choose to go to North America or Australasia for the second year of the B.Sc. course.

Degree structure:

Year 1

Core modules: at least 10 modules chosen from

Anatomy & Tissue Structure
 Aquatic Ecology
 Atoms & Molecules
 Biodiversity & Conservation
 Biomedicine and Society
 Biotechnology
 Cell Structure & Function
 Developmental Biology
 Diagnosis in Biomedical Science
 Evolutionary Biology
 Experimental Design and Data Analysis
 Genetics
 Global Change Biology
 Global Environmental Challenges
 Global Health & Disease
 Impact of Microbes
 Infection & Immunity
 Introduction to Organic Chemistry
 Hormones and Development
 Human Physiology
 Marine & Estuarine Biology
 Molecules of Life
 Organic Chemistry
 Physical Chemistry for Life Sciences
 Protein Biochemistry
 Skills in Biomedical & Life Sciences
 Spectroscopy
 Zoology

Optional modules

Up to five further modules in any subject

Year 2

Optional modules: four modules from

Biochemistry
 Cell Biology
 Developmental Biology
 Environmental Physiology
 Evolution
 Genetics
 Medical Microbiology

Microbiology
 Populations to Ecosystems
 Principles of Biodiversity Conservation
 Vertebrate Biology

Year 3

Core modules

Research project

Optional modules: eight modules from

Animal Behaviour
 Biology of Ageing
 Cancer
 Cell Cycle and Stem Cells
 Cell Signalling
 Cell Signalling, Transport and Disease
 Conservation in Practice
 Ecophysiology of host-pest interactions
 Environmental Pathogens
 Environmental Plant Biology
 Ethics in Biomedicine
 Frontiers in Ecology and Evolution
 Genetics
 Global Change Biology: Challenges and Solutions
 Immunology
 Insect Biology & Conservation
 Issues in Conservation Biology
 Life in Extreme Environments
 Medical Genetics
 Molecular and Biochemical Parasitology
 Neurobiology
 Protein Biochemistry
 Sustainable Agriculture
 Tropical Diseases

Year 4

Core module

Extended research project

Optional modules

Four masters-level modules selected from a wide range available.

Away From Campus: **Our Field Courses**



Lancaster Students in the Brazilian Amazon

Upland Ecology, Scotland

The mountains and upland areas of Scotland provide us with an opportunity to visit some of the few natural habitats left in the UK. We base ourselves at Kindrogan field centre, near Pitlochry, and visit sites of interest each day, including mountain plateaus, Caledonian pine forest, and other areas of importance to a range of plant and animal species. The focus is on understanding the landscape, the place of key species within it, and the conservation and management issues of upland regions. As well as visiting sites of great scenic beauty, we also get to know the fantastic flora of the region and usually see a broad range of animal species such as red deer, osprey, mountain hare, hen harrier and golden eagle.



Tropical Biology Field Course

As a consequence of our expansion of organismal biology teaching, we are currently developing a new tropical biology field course in Africa or South East Asia, which will be available for new students in year 3 of their degree. The course will have either a terrestrial and/or aquatic focus depending upon final

arrangements and staffing. Locations currently under consideration include Kenya, the Danum Valley in Borneo, or Indian Ocean coral reefs.

Biodiversity and sustainable development in... ...The Brazilian Amazon

The Amazon is a fascinating place to explore the conservation and development challenges facing tropical forests. We will be based in the Jari region in the north-eastern Brazilian Amazon, and will visit many places of interest. These include beautiful Amazonian forests and their wildlife, as well as rural communities and large-scale sustainable logging operations. This is a unique opportunity to work with Amazon experts from the Lancaster Environment Centre and understand the challenges of pursuing biodiversity conservation whilst also reducing poverty. We will learn how to monitor biodiversity and forest carbon stocks and assess rural livelihoods, including farming and Brazil nut collection.

Doñana National Park, Spain

We visit Doñana National Park in the southwest of Spain, one of the most important biodiversity hotspots in Europe. The area is home to over 1500 species of plants, over 400 species of birds and 50 species of terrestrial mammals including the Iberian Lynx, the most endangered of the world's cats. The course explores the diversity of habitat and organisms living in the area and the actions that can be taken to promote the conservation of biodiversity. Students gain practical experience of identification, critical observation and accurate recording of plants, invertebrates and birds. A guided visit to the national park provides students with an understanding of the role of National Parks in conservation.

Opportunities For Overseas Study



Study Abroad

The three-year B.Sc. Biological Sciences degree programme is available with a study abroad option. The year abroad is not an add-on to your degree; it is fully integrated so that you can complete your B.Sc. in just three years. Students on the study abroad scheme spend their first year in Lancaster, their second at a University overseas, and then return to Lancaster for the third and final year of the degree. Destinations for your year abroad include the USA, Canada and Australia.

More than 80% of our exchange students get an upper second or first class degree so, in addition to broadening your academic horizons, developing your personal and social skills and providing you with an understanding of another culture and society, the experience is also likely to enhance your job prospects.

Where can you go?

The majority of our partner Universities are in North America, located across the United States and Canada. You could spend your second year in Florida, Colorado, Texas, Miami, Maine, Illinois, Oregon, Michigan, Iowa, North Carolina, or Purdue, Indiana. Current partners in Canada are the University of Alberta (Edmonton), the University of Calgary and Trent University (Ontario). Alternatively, you also have the opportunity of studying in Australia. Here, we are linked with Griffith University and Queensland University of Technology (both in Brisbane), Macquarie University and Wollongong University (Sydney), Monash University (Melbourne) and Murdoch University (Perth). The choice of destinations and number of places can vary from year-to-year, so we cannot guarantee that you will be able to go to your first choice, but we are sure that wherever you go, it will be an experience to remember.

Can I afford it?

Whilst there are clear financial implications in living abroad for a year (and many students take the opportunity to do other travelling while they are abroad), the study abroad scheme does not cost as much as you might think. There is also some important financial help available in the form of (i) reduced fees to Lancaster University; you will pay just 15% of the usual tuition fee during the year abroad, and there are no fees payable to the overseas institution, (ii) an enhanced student loan, and (iii) a means-tested Government Travel Grant, which usually covers the cost of two return flights plus insurance.

Dual offer system

If you apply for a study abroad course, we will also automatically consider you for the 'standard' degree programme (for which the entry requirements are typically lower) and therefore you do not need to list both courses on your UCAS form. If, at any time during your first year, you decide that you no longer want to study abroad, you can simply switch to the standard degree programme.



What Do Our Students Think?



Emma Huck B.Sc. Hons Biological Sciences

"I chose Lancaster because I wanted a top university with excellent accommodation and facilities. Throughout my degree it has exceeded my expectations and I have really enjoyed additional aspects, such as the collegiate system. My course has allowed me to be involved in the fascinating research that the lecturers carry out here and has equipped me for a range of careers. My favourite part of my time at Lancaster has been the endless opportunities that are available, which have enabled me to build up a significant range of experience in three years. I have really enjoyed every aspect of Lancaster and the course and have been involved in most of the extra-curricular opportunities."



Student Profile

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Liam Fitzpatrick B.Sc. Hons Biological Sciences

"I absolutely loved my time at Lancaster University. From my very first visit to the campus, I knew that Lancaster was definitely going to be the place for me, and I've been proven right with a fantastic three years.

The staff have been so helpful at every step of the way, from picking my first year modules to putting the finishing touches to my dissertation, they've all been fantastic. Possibly the best thing I've found about the lecturers at Lancaster is how their enthusiasm for their subjects inspires you to want to learn more, it really is infectious!

I've made friends with people from all around the world during my time at Lancaster, having met them through my course or college and through some of the various sports and societies on campus too. I know I will definitely be keeping in touch with them after we all graduate!"

Student Profile

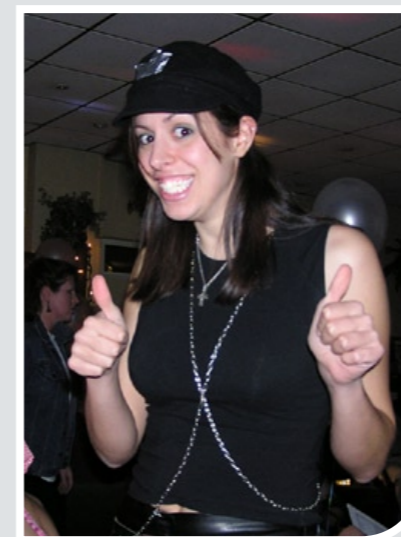


Mallory Gough B.Sc. Hons Biological Sciences

"I really enjoyed my time at Lancaster and particularly liked the campus and college system. The Biological Sciences degree schemes have a very wide choice of subject modules enabling students to formulate their preferences in the first year with a view to specialising in their favourite areas in subsequent years. I was able to achieve invaluable practical skills experience which has enabled me to continue my studies at Lancaster by way of a PhD studentship studying Alzheimer's disease."

Student Profile

13



Nicky Levett B.Sc. Hons Biological Sciences

"I remember coming to the university open day and just feeling that Lancaster was the best place for me to study. The department had a relaxed atmosphere and all the staff were very friendly and supportive. The academic knowledge and transferable skills that I gained during my degree have been essential in my job at Syngenta."

Student Profile

Working Towards a Career



Internship opportunities

We recognise that you want a degree that, as well as ensuring your academic excellence, also enhances your employability. All of our degree programmes contain a module which addresses these issues and offers training in CV writing and presentation skills. In addition colleagues from a wide range of industrial settings contribute their perspectives on employment issues and practices, ensuring that you're as well informed and prepared as possible.

Relevant work experience while you are at university is crucial to achieving a good graduate job. An internship will give you the opportunity to apply your academic knowledge in real world situations whilst helping you to develop your transferable skills such as team working, time management, leadership, networking and commercial awareness – and get paid for it! We offer competitive internships in regional businesses across the North-West, both full-time internships during the summer break and part-time opportunities throughout the year, through the Faculty of Science and Technology internship programme and in collaboration with Sector Skills Councils.

Not only can you gain valuable work experience, but employers frequently offer graduate roles to interns.

Gaining real world experience

The location of Lancaster makes it ideal for gaining experience through volunteering. Lancaster University Student Union runs Green Lancaster, providing plenty of opportunities to get dirty at the weekend and gain practical skills. Green Lancaster offers external placements, so students get the chance to gain volunteering experience working in the local community, in partnership with the RSPB, Lancashire Wildlife Trust and other partners. Nature reserves that are just a short journey from Lancaster include Heysham Moss (LWT), Leighton Moss (RSPB), Arnside Knott (Butterfly Conservation), Warton Crag (RSPB, LWT), Gait Barrows (NNR), Morecambe Bay Nature Improvement Area, Ingleborough National Nature Reserve and Colt Park Meadows, the Forest of Bowland and the spectacular limestone pavements at Hutton Roof (National Trust/Natural England). In under an hour you can be in the heart of the Lake District or Yorkshire Dales National Parks.

The Lancaster Award



The Lancaster award

At Lancaster we not only value your academic accomplishments, but also recognise the importance of those activities with which you engage outside your programme of study. The student experience is enhanced by including extra-curricular activities and, with more graduates than ever before and increasing competition for jobs upon leaving University, these are vital to your future prospects. We want to encourage you to make the very most of your University experience and to leave Lancaster as a well-rounded graduate. We have a wealth of opportunities to get involved in with initiatives such as work placements, volunteering, extracurricular courses, societies and sports. The Lancaster Award aims to encourage you to complete such activities, help you to pull them together in one place and then be recognised for your accomplishments. We want you to stand out from the crowd - the Lancaster Award will help you to do this.

Do your dissertation as a work placement

We offer our students the option of undertaking their final year dissertation as part of a work placement. This is organised using the contacts secured through the Enterprise and Business Partnerships centre and gives

students a fantastic opportunity to undertake a novel research project housed within a company or charity seeking environmental solutions to real problems. Recent projects offered to students have included work in partnership with local Wildlife Trusts, Natural England, the National Trust, Butterfly Conservation, the RSPB, as well as work with local consultancies concerning new land and water management techniques.



For those students who are interested in and committed to a teaching career, we offer a Bioscience Education dissertation project involving a placement at a local secondary school. Students on this placement design, develop and deliver teaching materials to Key Stage 3 and 4 pupils.

Careers



Lancaster Environment Centre Careers Fair

Careers

Graduates from Lancaster have an excellent employment record. The most recent data show that, six months after leaving university, 85% of our biology graduates were either in full-time employment, undertaking further study, or combining additional studies with part-time employment.

A biology degree provides students with a very wide range of transferable skills which are valuable for professional careers related to many aspects of research, business and public service. Examples of the types of employment for which our different degree programmes are suited include:

Biology – Environmental Microbiologist, Nature Conservation Officer, Research Scientist, Higher Education Lecturer, Secondary School Teacher, Soil Scientist, Crop Scientist.

Biological Sciences – Biotechnologist, Microbiologist, Molecular Geneticist, Forensic Scientist, Pharmaceutical Scientist, Food Technologist, Material Technologist, Research Scientist.

At Lancaster, a great deal of emphasis is placed on developing employability skills throughout the Biology and Biological Sciences degree programmes. This is achieved by:

- Encouraging all of our students to enrol for the Lancaster Award. This formally recognises and rewards voluntary work, work experience and participation in careers training programmes offered by the Centre for Employability, Enterprise and Careers (CEEC).
- Providing tutorials and workshops on careers planning and preparation as integral parts of each biology degree programme.
- Providing careers drop-in sessions with staff from CEEC every term, plus mentoring events to enable current students to receive practical advice from our former graduates.
- Ensuring students are kept fully informed of new employment opportunities and careers events held both on and off campus, via regular emailed careers bulletins.



Kate De Vere Smith (B.Sc.)

Past Student
NHS Clinical Perfusionist



Ami Weir (B.Sc.)

Past Student
Recording officer with the Wildlife Trust

Related Degree Schemes



As well as our Biology and Biological Sciences degree programmes, we also offer a range of biology-related degrees at Lancaster University, which study different aspects of the subject ranging from the molecular level up to the whole ecosystem scale. So, if you already know that you want to focus on one particular aspect of biology, then one of these courses might be for you.

But because of the flexibility of our degree programmes, you can always transfer courses at any time during your first year. So if you initially choose a specialist programme, but then realise once you're here that you want to study more broadly, you can always switch to either our Biology or Biological Sciences degrees.



Related Degree Programmes:

- BSc Biological Sciences with Biomedicine (UCAS code: C1B9)
- BSc Biology with Psychology (UCAS code: C1C8)
- BSc Biomedicine (UCAS code: C701)
- MSci Biomedicine (UCAS code: C703)
- BSc Biomedicine (Study Abroad) (UCAS code: C704)
- MSci Biomedicine (Study Abroad) (UCAS code: C705)
- BSc Biomedical Science (UCAS code: B990)
- BSc Biochemistry (UCAS code: C700)
- BSc Biochemistry (Study Abroad) (UCAS code: C702)
- BSc Biochemistry with Biomedicine (UCAS code: BC79)
- BSc Biochemistry with Genetics (UCAS code: C7C4)
- BSc Ecology and Conservation (UCAS code: C180)
- MSci Ecology and Conservation (Professional Experience) (UCAS code: 0X48)
- BSc Ecology and Conservation (Study Abroad) (UCAS code: C182)
- BSc Environmental Biology (UCAS code: C150)
- MSci Environmental Biology (UCAS code: C154)
- BSc Environmental Biology (Study Abroad) (UCAS code: C151)
- MSci Environmental Biology (Study Abroad) (UCAS code: C155)

To find out more about these different degree programmes you can either download the prospectus for the degree from the relevant course page on the university web pages or order the complete University Prospectus on-line. Alternatively, you can ask us to send you the relevant printed literature.



Typical requirements for entry to our Biology and Biological Sciences programmes:

BSc (Hons) degrees

- A-level grades **AAB**
- Scottish higher grades **ABBBB**
- International Baccalaureate **35 pts** with **16 pts** from best 3 HL subjects.
- BTEC: **DDD/DDM**

BSc (Hons) degrees (Study Abroad)

- A-level grades **AAA**
- Scottish higher grades **AAABB**
- International Baccalaureate **36 pts** with **16 pts** from best 3 HL subjects.
- BTEC: **DDD**

MSci (Hons) degrees

- A-level grades **AAA**
- Scottish higher grades **AAABB**
- International Baccalaureate **36 pts** with **16 pts** from best 3 HL subjects.
- BTEC: **DDD**

Note: For all degree programmes, we require a minimum of 2 science subjects from the 3 A-levels studied. We also require GCSE passes in English at grade **C** and Mathematics at grade **B**.

For information on subject requirements within other qualifications, please do not hesitate to contact us.

Applications

Applications for all of our undergraduate degree programmes must be made through the Universities and Colleges Admissions Service (UCAS), using the online service via: www.ucas.ac.uk

Degree programme UCAS codes

- BSc Biology** (UCAS code: C101)
- BSc Biological Sciences** (UCAS code: C100)
- MSci Biology** (UCAS code: C109)
- MSci Biological Sciences** (UCAS code: 1M66)
- BSc Biological Sciences Study Abroad** (UCAS code: C102)

Mature and overseas applicants

We welcome applications from mature or overseas students or those offering relevant subjects such as Access Diplomas or other awards. Your application will be considered individually on its merits and in relation to the University's guidance on equivalence to A levels.



Lancaster University has an extensive programme of financial support and funding for students that consists of:

Bursaries for life, living and learning

All students from the UK, with a household income of less than £42,600, will be awarded a **Lancaster Bursary** of **£1,000** for each year of their studies.

Students from the UK eligible for a bursary package will also be awarded our Academic Scholarship and/or Access Scholarship if they meet the criteria.

For up-to-date details of tuition fees, financial support, further guidance and information, please look at the Lancaster University Undergraduate Fees & Finance web page.

For 2016 entry, our Excellence Scholarship will form part of the Unconditional Offer Scheme for full time UK applicants with outstanding academic profiles. Further information is available at the Lancaster University Undergraduate Fees & Finance web page.

Lancaster University's priority is to support every student to make the most of their life and education. 400 students each year will be entitled to bursaries and/or scholarships to help them with the cost of fees and/or living expenses.

Scholarships recognising academic talent

Our **Academic Scholarship** is designed to reward the hard work and natural ability of full-time UK and Islands students applying to study with us regardless of their household income. Students achieving: A*, A*, A in their A-level examinations (or equivalent academic qualifications), and who place Lancaster as their firm choice, will be awarded a **£2,000** Lancaster Scholarship during their first year of undergraduate studies.

Our **Access Scholarship** is to support UK students with household incomes of less than £42,600, who achieve excellent A level grades of A*, A, A, or the equivalent academic qualifications. They will be awarded a **£1,000** Access Scholarship for each year of their studies. In addition, students from household incomes of less than £42,600 who achieve higher entry grades of A*, A*, A (or equivalent academic qualifications), will also be awarded our £2,000 Academic Scholarship in their first year of study. Continuation of the Access Scholarship is subject to satisfactory academic progression.

The Lancaster University Undergraduate Fees & Finance web page can be found at: www.lancaster.ac.uk/study/undergraduate/fees-and-funding

At the time of printing, 2016/17 bursaries, scholarships and access agreements remain to be confirmed and may be subject to change.



University Life In Lancaster

Lancaster is ranked 9th in the UK according to The Complete University Guide for 2016 is in the top 1% of universities in the world. It offers first class teaching and research; it is friendly and flexible, with a great social life. Personal supervision in departments and the collegiate system combine to provide students with the best possible opportunity to achieve their potential. Staff-student ratios are significantly higher at Lancaster University than the national average and small group teaching is an important feature of our educational approach. The cost of University accommodation (and general living costs) at Lancaster is among the lowest in the country.

The University has 12,000 students from more than 120 countries and over 2,500 staff. All our activities are based on a single campus. The University campus is 3 miles from Lancaster city centre and is like a small town, with its own Health Centre (including doctors' and dentists' surgeries and a pharmacy), shops, banks and a post office as well as restaurants, fast food outlets and bars. The Campus has excellent sporting facilities which include an 8 lane 25 metre indoor swimming pool, badminton, squash and tennis courts, a floodlit outdoor pitch, a sauna and solarium, weight training and fitness rooms.

The social life of the university revolves around 8 undergraduate and 1 postgraduate colleges, each with its own distinct identity. Every student and member of staff belongs to a college, and each student is allocated a personal tutor from his or her college. Each college has its own bar, common rooms and residences. Colleges are run by elected student committees and each college has a programme of social events including Christmas Dinners, shopping trips, visits to the Lake District and various nightclubs in the North West. Inter-college rivalry is reflected through a series of annual sporting events.

All students at Lancaster are automatically members of the Lancaster University Students' Union (LUSU). The Union deals with welfare matters and represents

students on University committees. The Union organises entertainment on campus and at its social centre and nightclub, The Sugar House, in the centre of the city. Over 60 clubs and societies are affiliated to LUSU which cater for sporting, leisure, political, outdoor, religious, cultural and educational pursuits. The Union also runs shops on the Bailrigg campus, selling stationery, gifts, non-prescription medication and second-hand books.

Accommodation

All residences have kitchen facilities for self-catering. Most college accommodation consists of single study bedrooms. All but a few of the rooms have en-suite bathrooms. A modern communications system throughout campus provides a telephone in every student room (including voicemail) with free cross-campus calls along with a connection point for the University's broadband computer network which delivers ultra-fast Internet access. The majority of first year undergraduates have a room on campus and over half of all undergraduates live in University-owned accommodation in Lancaster and the surrounding area.



Lancaster And The Local Area



By day...

Lancaster is a friendly, bustling city which has all the amenities of a large city without having lost its charm and character. Much in Lancaster is geared to students' needs as it is very much a university town. You will find all of the major high street retailers plus a number of independent specialist shops catering to the needs of students. The city can be reached in 10 minutes by shuttle buses that run every 5 minutes from the university. A short walk eastward from the University campus finds you in the Forest of Bowland Area of Outstanding Natural Beauty. The central part of Bowland is dominated by heather moorland which covers the wide expanses of sweeping fells. This contrasts with the verdant lowland landscapes around the periphery and the wooded valleys of the rivers Ribble, Hodder and Wyre. This and the easy access to local coastal environments, the National Parks of the Lake District and Yorkshire Dales means Lancaster is within reach of prime fieldwork sites for lovers of beautiful landscapes and wildlife. Outdoor enthusiasts will find a range of superb locations for walking, climbing, yachting and rowing.

By night...

It may only be a small city, but when it comes to nightlife, Lancaster can hold its own. The Sugarhouse (the student union nightclub) is the place to be every weekend, with a huge dance floor, great drinks offers and free buses back to campus. Alternatively, you can sip on sophisticated cocktails in bars like Mint, Revolution, or The Dalton Rooms, or dance the whole night through in clubs such as Hustle, Elements or The Lounge. For those of you looking for cheap drinks and a cheerful atmosphere, vibrant pubs such as Fibber McGees, The Friary or the city's two (yes, two!) Wetherspoons (known to 'those-in-the-know' as Top and Bottom 'Spoons'), will be your first ports of call. If real ales and live music are more your cup of mead, then Lancaster has an abundance of historic pubs, each one brimming with unique character just waiting to be discovered.

If it's a meal out you're after, you'll find yourself spoilt for choice. Not only do the majority of pubs offer great food at student-friendly prices, but Lancaster plays host to a number of restaurants, cafés and takeaways. Given the student-orientated nature of the city, most offer student discounts, as well as theme nights.

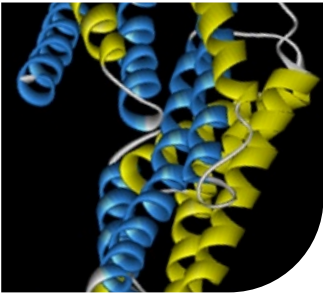
Lovers of theatre and the arts are well catered for too. Professional performances are staged at the Dukes Playhouse, the Nuffield Theatre (on the University campus) and the Grand Theatre.

You can find out more about Lancaster and the local area on the University web site: www.lancaster.ac.uk/explore



Market Street, Lancaster

Biology & Biological Sciences



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