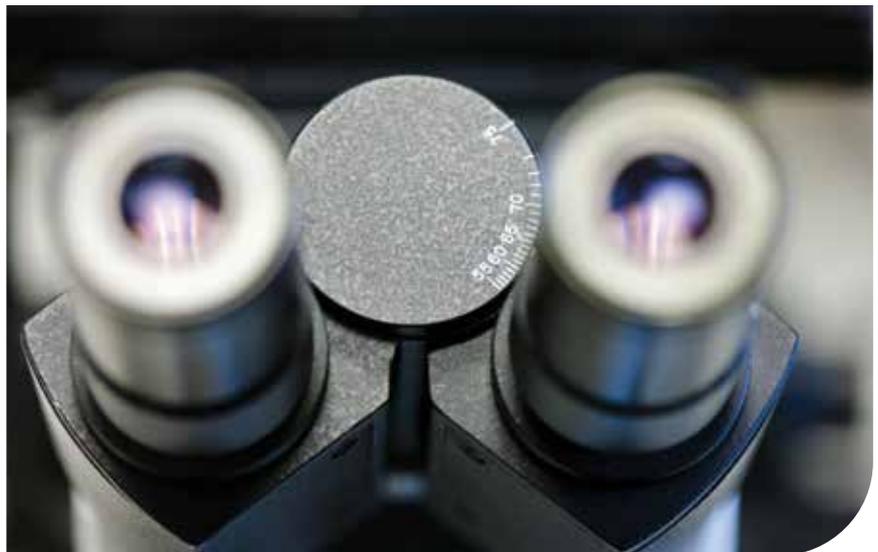
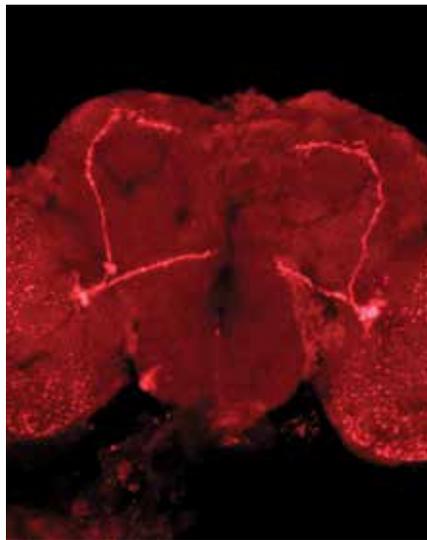




# Biomedical and Life Sciences

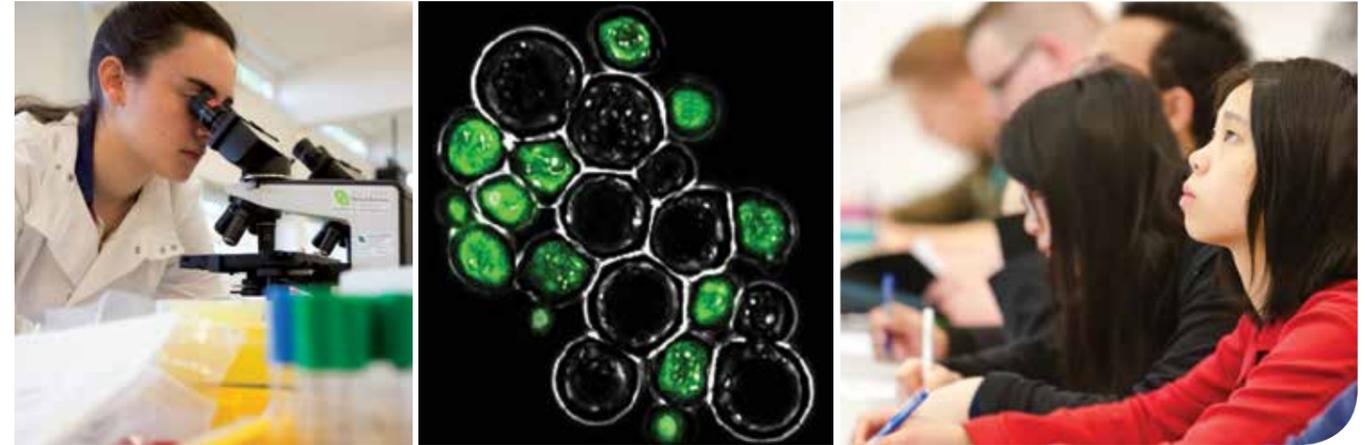
## Biomedical Sciences

Undergraduate Prospectus



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## Welcome to Lancaster

### Why study Biomedical and Life Sciences?

Biomedical and Life Sciences are fundamental to many of the important functions of human society, with biomedicine at the forefront of worldwide research and advances in healthcare. 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.

Lancaster University is central to such research, specialising in areas such as Alzheimer's disease, cancer (both the fundamental causes of cancer and individual forms of the disease including leukaemia, breast, skin, colon and prostate cancer), arthritis, environmental and microbiological health, corneal disease, Parkinson's disease, trypanosomal and tropical diseases, ageing, and inflammatory bowel disease. Such a diversity of biomedical research areas makes the top rated Division of Biomedical and Life Sciences at Lancaster the ideal choice for biomedical degrees. Studying one of our degrees provides you with the opportunity to receive a thorough grounding in the principles and issues of biology, and training in the key techniques associated with modern biomedical research.

Lancaster is one of the top places to study Biosciences in the UK. We were placed ninth nationally for our Biology courses in the Guardian 2015 league table. The University is in the top 1% of universities worldwide and regularly features in the top 10 universities in the UK. Our friendly collegiate system provides a welcoming and safe environment for study and our student accommodation recently retained the title of Best Student Halls in the UK from the National Student Housing Survey for the fourth year running.

The natural scenery of the Lake District, Yorkshire Dales and Morecambe Bay are right on our doorstep, while the bright lights of Manchester are within easy reach.

#### The excellence of the biomedical degrees we offer at Lancaster is built upon:

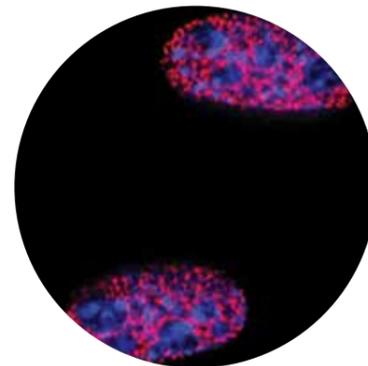
**Flexibility.** Depending on the degree scheme that you choose, the flexibility of our degrees mean that you can maintain a broad interest across a range of topics, or, if you prefer to, specialise in one particular area.

**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 courses is used for practical and workshop activities in the laboratory or the field, or in PC labs and classrooms.

**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 the NHS and the Lancaster Health Hub.** The Hub in the Faculty of Health and Medicine enables collaboration between partner NHS trusts and academic researchers in the development of high quality, clinically relevant research.

**Our study abroad options.** Spend the second year of your 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 the Division of Biomedical & Life Sciences



The Division of Biomedical and Life Sciences (BLS) in the Faculty of Health and Medicine was ranked joint first in the Allied Health Professions and Studies Unit of Assessment in the most recent Research Assessment Exercise. The Division's established history of high quality research in biomedical science has been recently further boosted by significant investment including a number of new appointments. Due to our high level of research activity, our students benefit from research led teaching and exposure to up-to-date facilities and cutting edge research expertise during their laboratory projects.

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Academic staff members in BLS are responsible for the co-ordination of biomedical teaching and research activities at Lancaster University and all could contribute to your degree, depending on the modules you choose to take. The main focus of the Division's research activities is the fundamental molecular and cellular aspects of human disease. Our research is grouped around the following core themes:

- **Cancer Biology and DNA Repair** - Research groups are investigating a number of different aspects of the molecular and cellular biology of cancer including: cellular effects of exposure to carcinogens and ultraviolet light, DNA repair mechanisms, cell cycle control, and the molecular events leading to leukaemia.
- **Ageing and Neurodegenerative Disease** - Progressive degeneration of the nervous system is a feature of a number of human diseases characterised by impaired movement or cognition. Researchers in the Division are studying the underlying processes that lead to brain dysfunction and degeneration in Alzheimer's disease, Parkinson's disease, hydrocephalus and ageing.

- **Microbiology and Parasitology** - The microbiological research activities of the Division are aimed at a better understanding of the cell biology of protozoan parasites and yeast. In addition to its application to medical parasitology our work also exploits microorganisms as models for understanding human cellular function. The Unit works in close collaboration with microbiologists in the Lancaster Environment Centre.
- **Cell Biology and Biochemistry** - The Division includes a number of research groups whose work is focused on applying biochemical and structural techniques to understanding cellular function at its fundamental level. Particular research interests include corneal transparency and dysfunction, proteoglycan structure and function, the biochemical and genetic characterisation of angiotensin converting enzyme (ACE), and mechanisms of ageing.



# Degree Programmes in the Division of Biomedical and Life Sciences

In addition to our Biomedical Sciences degrees we offer a range of bioscience degrees. For information on these programmes please see the Biochemistry and the Biological Sciences prospectuses.

- Biomedical Science: BSc Hons
- Biomedicine: BSc Hons/MSci
- Biomedicine: BSc Hons/MSci Study Abroad
- Biochemistry: BSc Hons
- Biochemistry: BSc Hons Study Abroad
- Biochemistry with Biomedicine: BSc Hons
- Biochemistry with Genetics: BSc Hons
- Biological Sciences with Biomedicine: BSc Hons
- Biological Sciences BSc Hons/MSci
- Biological Sciences BSc Hons/MSci Study Abroad
- Biology with Psychology: BSc Hons

Our 3-year BSc degree schemes provide you with a range of options. The schemes range from highly specialised degrees to flexible degrees with a choice of modules covering the whole spectrum of biology, from ecology and the conservation and management of biological resources, through to genetics and biochemistry. We also offer flexibility to move between degree programmes. The degrees are taught by staff from the Division of Biomedical and Life Sciences, the Lancaster Environment Centre, the Department of Chemistry and the Department of Psychology in order to provide a broad range of subjects enabling students to choose or tailor the degree scheme to match their interests. There is something here for everyone!

## Opportunities for Study Abroad

The second year of the Study Abroad scheme is spent 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 scheme.

## Cutting Edge Research Projects

During your degree, you'll conduct your own laboratory based research project where you'll benefit from the research experience of our internationally renowned academic staff and be exposed to up-to-date facilities and a cutting edge research environment. Not only is this independent research project an important element of our research-led teaching giving you hands-on experience in a research lab, but you might also become a published author! Here are some of our recent publications to which our undergraduate students contributed and gained authorship:

Parthasarathy V., McClean P.L., Hölscher C., Taylor M., Tinker C., Jones G., Kolosov O., Salvati E., Gregori M., Masserini M. & Allsop D. A novel retro-inverso peptide inhibitor reduces amyloid deposition, oxidation and inflammation and stimulates neurogenesis in the APP<sup>swe</sup>/PS1<sup>ΔE9</sup> mouse model of Alzheimer's disease. (2013) PLoS ONE 8(1):e54769. doi: 10.1371/journal.pone.0054769.

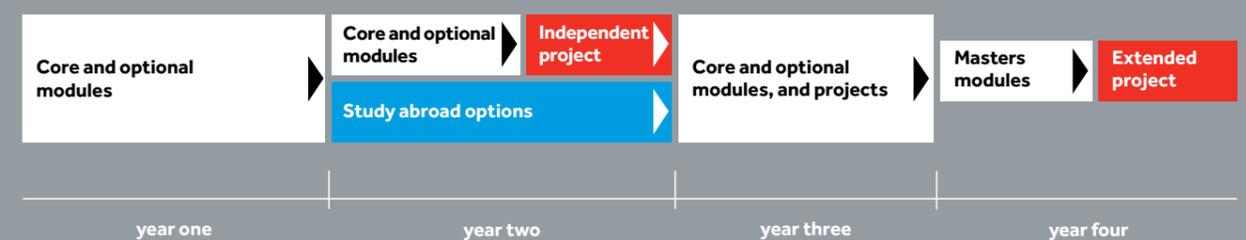
André, J., Kerry, L., Qi, X., Hawkins, E., Drižytė, K., Ginger, M.L. and McKean, P.G. (2014) An alternative model for the role of RP2 in flagellum assembly in the African trypanosome. Journal of Biological Chemistry 289(1): 464-75

## Integrated Masters

The MSci degree is a 4-year integrated Masters course allowing you to undertake the same taught modules as those available on the 3-year BSc variant of the course, but with the added benefit of a fourth year consisting of Masters level taught modules and an extended research project. Students can apply via UCAS for either the BSc (Hons) or the MSci course variants (subject to the necessary initial entry criteria being met). However, individuals enrolled on the BSc (Hons) course, should they achieve a minimum overall performance of upper second class in their second and third years, can apply to transfer to the fourth year of the MSci course on a competitive basis.

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# The Degree Structure



# Biomedical Science

BSc Hons. UCAS Code: B990



Lancaster's Biomedical Science degree is accredited by the Institute of Biomedical Science (IBMS) and provides a thorough grounding in the theory and laboratory techniques associated with Biomedical Science - a subject dealing with the study of life processes within the context of human health and disease. This IBMS accredited degree, along with a training period in an NHS lab, represents a core route to employment in the NHS as a Biomedical Scientist.

As part of your Biomedical Science degree, you will also carry out a laboratory-based project and can draw on the expertise of our academic staff who have vast biomedical research experience. This includes research into skin, colorectal, breast and prostate cancers; Alzheimer's and Parkinson's diseases; arthritis; hydrocephalus and other human conditions and diseases.

4 Taught jointly with clinical and biomedical staff from local hospitals, our Biomedical Science degree is a very structured scheme in which the majority of modules are compulsory. Our degree is designed to focus on the key aspects of modern day biomedicine, and is ideal for students with a broad interest in human life processes and disease. It involves the study of subjects such as biochemistry, cell biology, genetics and physiology which are at the heart of modern medical and health research. These subjects are taught with a particular emphasis on the molecules and mechanisms fundamental to life processes and how these are disrupted by disease.

You'll begin your degree with the study of 15 wide-ranging modules, including an Introduction to Biomedical Science, Biomedicine and Society, and Diagnosis in Biomedical Science. In the second year of your course, you'll move on to study subjects such as Biochemistry, Cellular Pathology, and Medical Microbiology. Finally, in this highly specialised degree scheme, you'll focus even more on aspects of human disease by taking modules in Cancer, Medical Genetics, and Pathobiology. Modules are assessed through a combination of coursework, end-of-module tests and summer examinations.



## DEGREE STRUCTURE

### YEAR 1

**(Compulsory modules)**  
Introduction to Biomedical Science  
Biomedicine & Society  
Diagnosis in Biomedical Science  
Skills in Biomedical & Life Sciences  
Experimental Design & Data Analysis  
Molecules of Life  
Cell Structure & Function  
Genetics  
Biotechnology  
Protein Biochemistry  
Anatomy & Tissue Structure  
Impact of Microbes  
Infection & Immunity  
Hormones & Development  
Human Physiology

### YEAR 2

**(Compulsory modules)**  
Biochemistry  
Clinical Biochemistry  
Cell Biology  
Cellular Pathology  
Medical Microbiology  
Haematology & Transfusion Science  
Genetics  
Practical Physiology

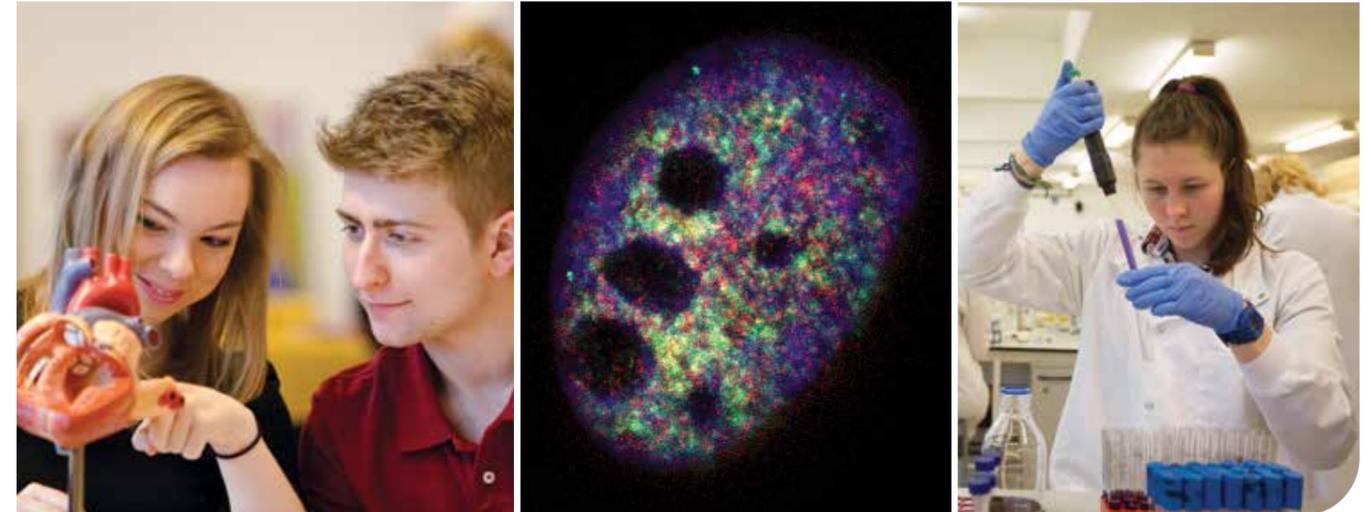
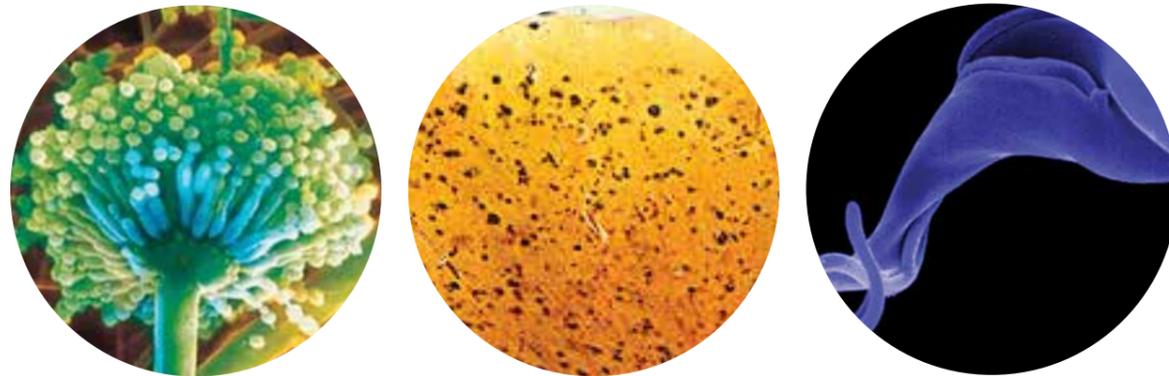
### YEAR 3

**(Compulsory modules)**  
Immunology  
Medical Genetics  
Cancer  
Pathobiology  
Environmental Pathogens  
Enhancing your Employability and Career Potential  
**(Optional modules, one selection)**  
Cell Signalling 1  
Cell Signalling, Transport & Disease  
**(Optional modules, one selection)**  
Cell Cycle and Stem Cells  
Ethics in Biomedicine

# Biomedicine

BSc Hons and MSci. UCAS Codes: C701 and C703

BSc Hons and MSci (Study Abroad). UCAS Codes: Pending



The Biomedicine degree schemes offer more flexibility than our IBMS-accredited Biomedical Science degree (B990), by allowing students to tailor the second and third years of their course more effectively to their personal interests within the field and with the added possibility of completing a four-year integrated masters. You can enrol on either the MSci or the BSc degree scheme, subject to the necessary entrance requirements, and may be able to transfer between degrees at a later stage.

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These Biomedicine degrees are aimed at those with a broad interest in human life processes and disease. They involve the study of subjects such as biochemistry, cell biology, genetics and physiology which are at the heart of modern medical and health research. These subjects are taught with a particular emphasis on the molecules and mechanisms fundamental to life processes and how these are disrupted by disease.

You'll begin your degree with the study of 15 wide-ranging compulsory modules, including an Introduction to Biomedical Sciences, Infection & Immunity and Protein Biochemistry. All the modules at this stage are compulsory in order to ensure that our students achieve a suitable initial grounding in all general areas of Biomedicine. In the second year students again take a range of compulsory modules covering four core areas within Biomedicine.

However, students have the flexibility to choose four techniques modules covering key practical disciplines within Biomedicine. Students will also conduct a short laboratory-based project.

In the final year of the BSc (Hons) degree students take 5 compulsory modules but, again, have the flexibility to choose another 3 modules. If you achieve the necessary criteria to proceed to the fourth year of the MSci degree, you will study Immunology, Diseases of the Brain and Molecular Basis of Cancer plus one other optional module and an extended research project. You will also receive in-depth training in the key techniques associated with modern biomedical practices.



## DEGREE STRUCTURE

### YEAR 1

**(Compulsory modules)**  
 Introduction to Biomedical Sciences  
 Anatomy & Tissue Structure  
 Infection & Immunity  
 Hormones & Development  
 Human Physiology  
 Molecules of Life  
 Cell Structure & Function  
 Genetics  
 Biotechnology  
 Protein Biochemistry  
 Experimental Design & Data Analysis  
 Impact of Microbes  
 Biomedicine & Society  
 Diagnosis in Biomedical Science

### YEAR 2

**(Compulsory modules)**  
 Biochemistry  
 Cell Biology  
 Genetics  
 Medical Microbiology  
**(Optional modules, 1 selection)**  
 Microbiological Techniques  
 Practical Physiology  
**(Optional modules, 1 selection)**  
 DNA Technology  
 Haematology & Transfusion Science  
**(Optional modules, 1 selection)**  
 Biochemical Techniques  
 Clinical Biochemistry  
**(Optional modules, 1 selection)**  
 Cellular Pathology  
 Cell Biology Techniques

### YEAR 3

**(Compulsory modules)**  
 Immunology  
 Medical Genetics  
 Cancer  
 Ethics in Biomedicine  
 Enhancing your Employability & Career Potential  
**(Optional modules, 1 selection)**  
 Cell Signalling  
 Genetics  
**(Optional modules, 1 selection)**  
 Tropical Diseases  
 Neurobiology  
 Cell Signalling, Transport & Disease  
**(Optional modules, 1 selection)**  
 Environmental Pathogens  
 Molecular & Biochemical Parasitology  
 Biology of Ageing  
 Pathobiology

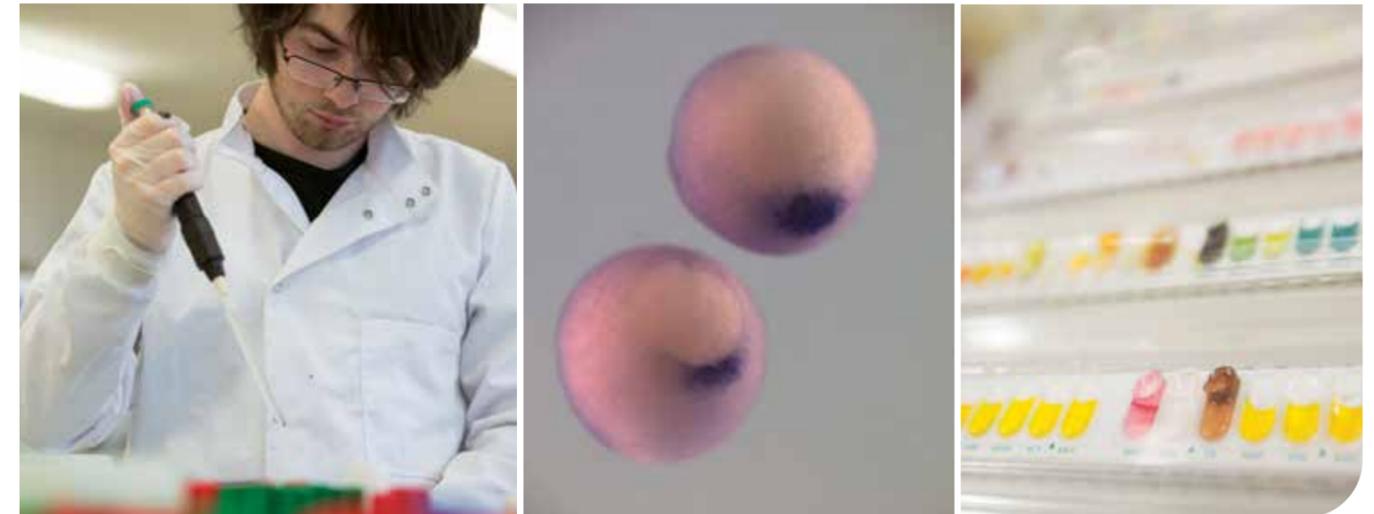
### YEAR 4

MSci extended research project  
**(Compulsory modules)**  
 Immunology  
 Diseases of the Brain  
 Molecular Basis of Cancer  
**(Optional modules, 1 selection)**  
 Drug Discovery  
 Microbes & Disease

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# Biological Sciences with Biomedicine

BSc Hons. UCAS Code: C1B9



Biomedicine is at the heart of much of the exciting research in biological sciences worldwide. Our Biological Sciences with Biomedicine degree involves teaching by members of both the Faculty of Health and Medicine and Lancaster Environment Centre providing students with a mainstream biological sciences degree course with a strong bias towards human and disease-related topics. The Biological Sciences with Biomedicine degree is aimed at students with a broad interest in the biological sciences who have a specific interest in the biological mechanisms underlying the maintenance of human health or disease conditions.

The degree is designed to provide a broad grounding in bioscience subjects whilst maintaining an emphasis on specific biomedical topics. The course will involve core subjects in biomedicine and also other subjects such as cell structure & function, evolution genetics, and protein biochemistry which are at the heart of modern biological and biomedical research. You'll also receive in-depth training in the key techniques associated with modern biological and biomedical practices by taking a series of techniques courses, some of which are taught by staff from a local hospital.

In your first year, you'll study core Biomedical Science subjects such as Genetics and Biomedicine & Society. You'll also choose from other bioscience modules, such as Evolutionary Biology, Aquatic Ecology and Organic Chemistry. Such diversity allows you to specialise in the more biomedical aspects of the course in later years or to transfer to a completely different field in the biosciences. Similarly, the second year of your course gives you the choice between more biomedically-oriented subjects, such as Medical Microbiology and DNA Technology, or subjects such as Evolution and Environmental Physiology.

In your final year, you can tailor your degree to your own interests by selecting from a diverse range of subjects including Cell Signalling, Environmental Pathogens, Tropical Diseases and Immunology.

During your degree, you'll conduct your own laboratory-based project where you'll benefit from the research experience of our internationally renowned academic staff.



## DEGREE STRUCTURE

### YEAR 1

#### (Compulsory modules)

Molecules of Life  
Cell Structure & Function  
Genetics  
Biotechnology  
Protein Biochemistry  
Impact of Microbes  
Anatomy & Tissue Structure  
Infection & Immunity  
Hormones & Development  
Human Physiology  
Experimental Design & Data Analysis  
Skills in Biomedical & Life Sciences  
Diagnosis in Biomedical Science

#### (Example optional modules, two selections)

Biomedicine & Society  
Spanish Field Course  
Atoms & Molecules  
Organic Chemistry  
Physical Chemistry for Life Sciences  
Evolutionary Biology  
Variety of Life  
Life in a Changing Environment  
Biodiversity & Conservation  
Aquatic Ecology

### YEAR 2

#### (Compulsory modules)

Cell Biology  
Medical Microbiology  
Cell Biology Techniques  
Microbiological Techniques

#### (Optional modules, one selection)

Biochemistry  
Evolution

#### (Optional modules, one selection)

Genetics  
Environmental Physiology

#### (Optional modules, one selection)

Biochemical Techniques  
Clinical Biochemistry

#### (Optional modules, one selection)

DNA Technology  
Haematology & Transfusion Science

### YEAR 3

#### (Compulsory modules)

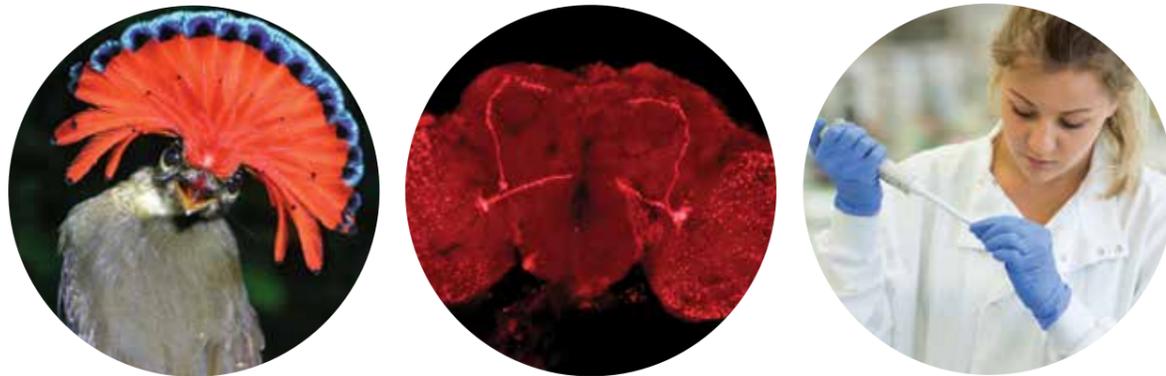
Ethics in Biomedicine  
Enhancing your Employability and Career Potential

#### (Optional modules, six selections)

Cell Signalling  
Cell signalling, Transport and Disease  
Cell Cycle and Stem Cells  
Genetics  
Medical Genetics  
Protein Biochemistry  
Molecular & Biochemical Parasitology  
Immunology  
Tropical Diseases  
Neurobiology  
Biology of Ageing  
Environmental Pathogens  
Cancer  
Pathobiology  
Conservation in Practice  
Issues in Conservation Biology  
Frontiers in Ecology and Evolution  
Animal Behaviour  
Global Change Biology: Challenges & Solutions  
Environmental Plant Biology  
Ecophysiology of Host-pest Interactions  
Sustainable Agriculture

# Biology with Psychology

BSc Hons. UCAS Code: C1C8



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The Biology with Psychology degree is for students wishing to develop an understanding of the influences that govern human behaviour, underpinned by knowledge of the biology of the system. The degree is designed so that students can choose the areas of biology that interest them the most and link these studies to a progressive understanding of developmental, physiological and cognitive psychology. As well as in-depth knowledge of Biology and Psychology, the degree provides students with an impressive mixture of both scientific, analytical skills, communication and interpersonal skills. This unique mixture provides students with an excellent basis for future employment.

This course is taught jointly by biology staff in the Faculty of Health & Medicine, the Lancaster Environment Centre and the Department of Psychology, so students benefit from the excellent complementary facilities which these Departments have to offer. All staff in these areas are research active and many of them are recognised as international leaders in their fields.

In the first year, students take three 5-module (or the equivalent) units. Students take a 1-unit course in Psychology and the remaining 2 units from those on offer in Biology. In the second and third years, courses are designed to develop more specialist knowledge and to allow students to pursue their particular areas of interest.

Students also take biology techniques courses, and in the final term of the second year, begin a dissertation module. This involves a practical project undertaken within biology. In the final year, students take three psychology modules and four biology modules. The compulsory modules available on the scheme principally focus on understanding the biology which underpins human behaviour and aims to provide an opportunity to understand Psychology in greater depth.



## DEGREE STRUCTURE

### YEAR 1

#### Unit 1: Understanding Psychology

An overview of the core psychological areas of Cognitive, Developmental, Social & Neuropsychology.

#### Units 2&3: Biology

##### (Compulsory modules)

Cell Structure & Function  
Genetics  
Human Physiology  
Skills in Biomedical & Life Sciences  
Experimental Design & Data Analysis  
Evolutionary Biology

##### (Optional modules, one selection)

Infection & Immunity  
Introduction to Biomedical Sciences

##### (Optional modules, two selections)

Biotechnology  
Hormones & Development  
Biomedicine & Society  
(Optional modules, one selection)  
Protein Biochemistry  
Diagnosis in Biomedical Science

### YEAR 2

#### (Compulsory modules)

Cognitive Psychology  
Brain & Behaviour  
Developmental Psychology  
Cell Biology  
Cell Biology Techniques  
Practical Physiology

#### (Optional modules, one selection)

Medical Microbiology  
Genetics

### YEAR 3

#### (Compulsory modules)

Advanced Human Neuropsychology  
Prozac Nation: Human Psychopharmacology  
Neurobiology  
Enhancing your Employability and Career Potential  
Animal Behaviour

#### (Optional modules, one selection)

Advanced Cognitive Psychology  
The Developing Mind

#### (Optional modules, one selection)

Cell Cycle & Stem Cells  
Ethics in Biomedicine  
Cancer

#### (Optional modules, one selection)

Pathobiology  
Biology of Ageing

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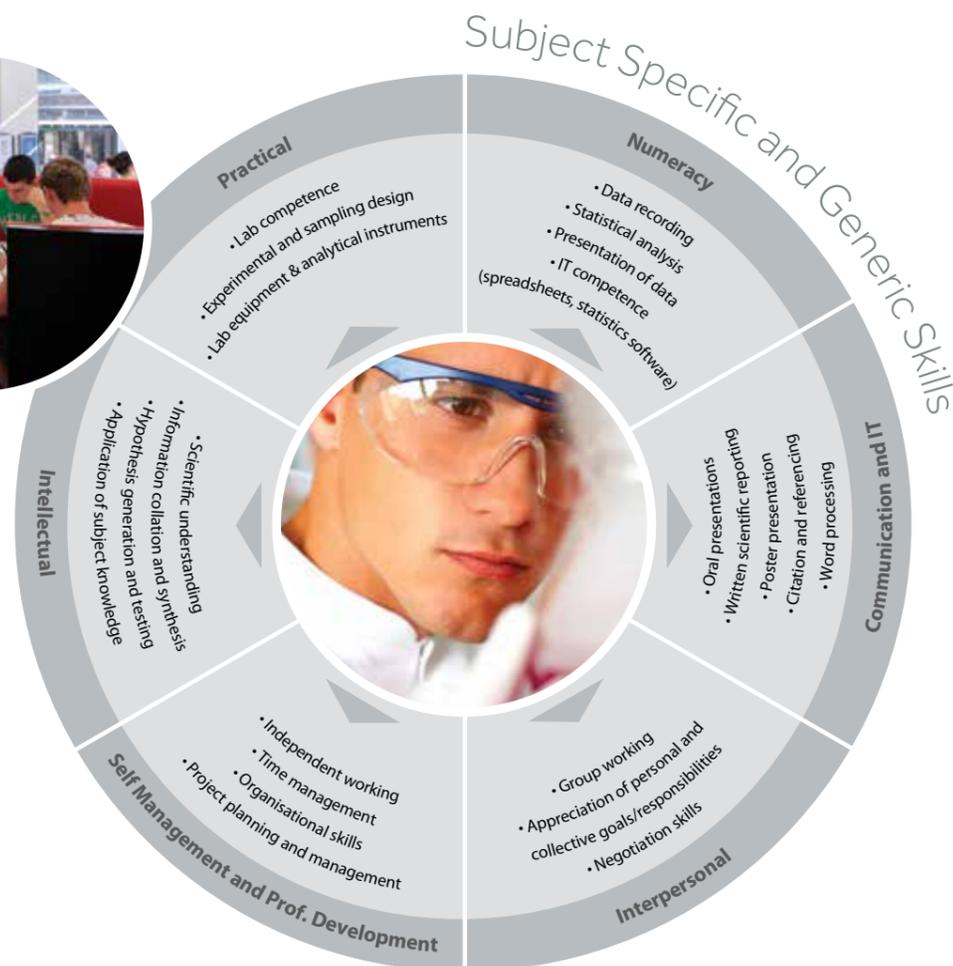
# Studying **Biomedical and Life Sciences**



Our biomedical and life sciences degree courses 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.



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# **Opportunities** for Overseas Study



## **Study Abroad**

The Biomedicine degrees are 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 BSc in just three years and your MSci in four 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.

## **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 scheme (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 scheme.

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# What Do Our Students Think?



**Levina Masterson**  
**BSc (Hons) Biological Sciences with Biomedicine**

I chose Lancaster for the fantastic reputation of the University and its Biology department. When I visited the campus I knew the gorgeous environment would suit my needs perfectly. I felt at home straight away and it just got better during my time here! In addition, Lancaster is a beautiful little city with lots of culture, picturesque views and a multitude of bars; the nightlife is honestly fantastic.

Our department make you their priority. The lecturers become more like respected friends than those in charge of you and this aided my whole learning experience - particularly when coupled with a reassuring and welcoming open-door policy. The teaching style is second to none: the ratio of lectures to workshops is perfect and allows both a hands-on and independent approach to learning. The field trips and exciting practicals were always the best for me as it brought science to a wholly enjoyable level. And moreover, personal academic tutor system is faultless and provided me with all the help and support I ever needed.

**Claire Reid**  
**BSc (Hons) Biomedical Science**

From my very first visit to Lancaster I knew it was the perfect choice for me; the campus university and highly reputable department were two things that attracted me most. Lancaster definitely offered the home from home feeling and as a fresher I settled in extremely quickly. Although Lancaster is only a small city, it has everything you need and a nightlife that won't disappoint. The BLS department is second to none and provides excellent support and guidance from the very first day; academic advisors are in place to offer constant support throughout your studies and provide that little extra encouragement when needed. The regular practical sessions to further expand upon lecture material are extremely beneficial and allow you to develop skills that are essential for future employment. I was also able to complete a dissertation which enabled me to develop an understanding of many key experimental techniques that I am now able to transfer into the working environment.



**Ciny Edathanal**  
**MSci (Hons) Biomedicine**

Lancaster University stood out to me because of its reputation for world class research, which I thought would contribute to the success of my degree. Not surprisingly, the dissertation I completed in my final year involved the latest advances made in Alzheimer's disease. The lecturers were the best in their field and their passion inspired me to switch from a three year degree to the four year integrated masters degree.

Outside of studying, the vibrant campus based university with its numerous clubs and societies gave me the complete student experience. The university also encouraged me to think about what to do after graduation and provided a lot of support in preparing me for the "real world". All in all, I really enjoyed my time at Lancaster. I wish I could go back to my first year and do it all again!



**Nicholas Garner**  
**BSc (Hons) Biomedical Science**

I was drawn to Lancaster University from my first visit as a college student. Not only is the University a beautiful place to live and study as a student, but in the BLS department specifically, it is clear the level of detail and attentiveness that goes into ensuring every student achieves their full potential and has the best experience. For me, the research-led teaching at Lancaster University has made my degree most exciting. Being taught by lectures at the very peak of scientific research means you study to the height of modern Biology, which is a fantastic experience.

Throughout my time at Lancaster I have been supported by tutors and advisors on all aspects of University life and my career - there is a clear sense the University really does care about your future. I chose Biomedical Science as my course as it perfectly suited my medical-based interests in Biology, but there is real scope across the entire department to tailor your degree to suit you. As for the future, my aim is to gain entry into Medical School and to qualify as a Doctor - Lancaster University has now provided me with the means of achieving this.



# Working Towards a Career



## Real World Experience Opportunities

We recognise that you want a degree that, as well as ensuring your academic excellence, also enhances your employability. For many years, we've offered placement opportunities to our students and now we've expanded this offering to all degree schemes within Biomedical and Life Sciences. In collaboration with Sector Skills Councils, competitive internships are offered to our students in industries across the North-West and beyond such as the NHS, GlaxoSmithKline and AstraZeneca.

16 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.

The location of Lancaster University makes it ideal for gaining experience through volunteering. Lancaster University Student Union runs Involve, a programme which provides you with the opportunity to get involved in your local community - students can gain experience working with local charities, primary and secondary schools, hospitals, and supporting older people to feel safe in their homes. This is ideal for those with specific career goals who want to get ahead of the crowd with real experience in their chosen area. Community projects also suit those who simply want to offer some of their free time for a good cause.

## 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.

## Careers

Our graduate employment rates are higher than many of our competitors and vast majority of our 2013 graduates were in full employment or further study within 6 months of graduating. Many students go on to professional careers making use of their academic skills in research, business and public service. Others choose to continue their studies to MSc or PhD including on our own world-class postgraduate programmes.

All of our degree schemes contain a module run by colleagues in CETAD (Centre for Education, Training and Development) which addresses career development and employability issues and offers training in interpersonal skills, 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.

Our biomedical and life sciences degrees also provide 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 employment undertaken by some of our recent Biochemistry graduates include:

- Laboratory Technician - National Milk Laboratories Limited
- Medical lab Assistant - NHS
- Biomedical Scientist - Dorset County Hospital
- Scientific Assistant - ATC (Allied Technical Centre)
- Grad Scheme (Line Management) - United Biscuits
- Healthcare Assistant - NHS

At Lancaster, a great deal of emphasis is placed on developing employability skills throughout all our 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 Careers unit.
- 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 the Careers unit 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.



# Admissions Information



## Typical requirements for entry to our degree programmes

### BSc (Hons) degrees

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

### 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.

### MSci (Hons) degrees (including Study Abroad)

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

Please note: For all degree programmes, we require a minimum of 2 science subjects from the 3 A levels studied, plus GCSE passes in English at grade C and Mathematics at grade B. For the Biomedical Science and Biomedicine degrees we require a minimum of AS level Chemistry at grade C.

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](http://www.ucas.ac.uk)

### Degree programme UCAS codes

BSc Biomedical Science (UCAS code: B990)  
 BSc Biomedicine (UCAS code: C701)  
 MSci Biomedicine (UCAS code: C703)  
 BSc Biomedicine Study Abroad (UCAS code: TBC)  
 MSci Biomedicine Study Abroad (UCAS code: TBC)  
 Biological Sciences with Biomedicine (UCAS Code: C1B9)  
 Biology with Psychology (UCAS Code: C1C8)

### 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.

### Widening Participation

Lancaster University has a committed approach to widening participation and understands that some students face a number of barriers and obstacles when considering university. We know that for many students who come from a non-traditional university background, even thinking about applying to university is a big step. We want to ensure that future applicants to Lancaster are not held back by any barriers and that our student cohort reflects the diverse society that we live in.

# Bursaries and Scholarships

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 England, with a household income of more than £25,000 but less than £42,600, will be awarded a **Lancaster Bursary of £1,000** for each year of their studies. In addition, as part of the National Scholarship Programme, students from England with a household income of less than £25,000 will receive a **£1,000 Bursary a £1,000 Fee Waiver and a £1,000 Accommodation Discount** in the first year of study, plus a Lancaster Bursary of £1,000 in subsequent years

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

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 at: [www.lancaster.ac.uk/study/undergraduate/fees-and-funding](http://www.lancaster.ac.uk/study/undergraduate/fees-and-funding)

### Scholarships recognising academic talent

Our Academic Scholarship is designed to reward the hard work and natural ability of full-time UK 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 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.

Lancaster University's priority is to support every student to make the most of their life and education. Over 600 students each year will be entitled to bursaries and/or scholarships to help them with the cost of fees and/or living expenses

# Virtual Campus Tours



To take a virtual campus tour please visit: - <http://www.lancaster.ac.uk/campustour/index.htm>

Sports Centre: - <http://sportscentrelancaster.co.uk/>

# University Life and Support at Lancaster



Lancaster is one of the top UK universities. It offers first class teaching and research; it is friendly and flexible, with a great social life. The University has 11,000 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, cafés, 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, steam room, weight training and fitness rooms.

## The Students' Union

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 run 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.

## Support for your studies

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 better 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 Tutorial Programme

All students joining the Division of Biomedical and Life Sciences are assigned a member of academic staff who acts as their advisor throughout their time at Lancaster. You will have a one-to one meeting with your advisor at least once a term to discuss your progress. In addition, during the first year your advisor will also host small group tutorials to enable you to develop key transferable skills which will be required during your degree. Our friendly and approachable staff endeavour to make themselves as freely available as possible to students they are teaching or to their advisees.

## The Colleges

Lancaster is one of a small number of leading UK universities to operate a college structure. Each college has its own history and traditions, creating a more supportive student environment and more opportunities to get involved in activities. The social life of the university revolves around the 8 undergraduate colleges and 1 postgraduate college, each with its own distinct identity. Every student and member of staff belongs to a college and each student is assigned a College Advisor from his or her college who provides support through several meetings held across each year of study.

Our colleges also offer facilities for students who live off-campus and provide a range of facilities including Wi-Fi enabled social spaces, games rooms and bars – and each college also boasts a welcoming Junior Common Room which give members the opportunity to take on leadership roles within the college community. Colleges are run by elected student committees and all colleges have strong focuses on both social and sporting activities organising regular college trips and excursions such as shopping

trips, Christmas dinners, visits to the Lake District, as well as taking part in inter-college competitions and sports leagues too.

Safety and security for students is provided through a dedicated 24-hour team of college porters.

## The Careers Service

The Employment and Recruitment service at Lancaster is comprised of a dedicated team of careers advisors who are there to assist students in gaining employment and enhancing career objectives. You can register with their service prior to arriving at Lancaster and they can help you from anything to do with part-time employment during your study, CV enhancement, interview preparation, networking guidance and careers workshops.

The Biomedical Science department (BLS) run an essential employability module and there is an optional educational dissertation project which involves teaching practice within a secondary school. BLS also facilitates careers talks, where professionals in the industry are invited to give a presentation on their career progression.

# 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 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](http://www.lancaster.ac.uk/explore)



# Visiting Us

## Visiting the University

Lancaster is very well served by road, rail and air networks (see map). Annual Visit Days take place in July and August of each year for anyone thinking of applying to Lancaster. These are an excellent opportunity for students considering Higher Education entry to visit Lancaster and find out about degree programmes, talk to Biology staff and go on a campus tour. Alternatively, there are regular Campus Tours throughout the year. There are tours of the University and its facilities and you will see student accommodation in a College. If you want to attend an annual visit day or would like to join a conducted tour, please visit the University's website to book a place or e-mail: [visitus@lancaster.ac.uk](mailto:visitus@lancaster.ac.uk) Telephone enquiries can be made to UK Student Recruitment and Outreach Team on: 01524 593724.

If you would like to visit the University informally, you are welcome to do so at any time. You do not have to advise us of your visit; the campus is like a small town and you are welcome to use the shops, Sports Centre, bars and restaurants and to visit the Library. Please contact the admissions coordinator for a map of the University campus.

## Visiting us at Lancaster

We run subject-specific Open Days for potential Lancaster students. Once you've applied through UCAS you'll be invited to come to one of these Open Days, which are held between November and March. The Open Days are designed to provide you with detailed information about the degree courses and to allow you to get a taste of being an undergraduate here. You will be able to talk to Admissions and subject tutors, see some of the biology research going on, join a conducted tour of the campus, and find out about the first-rate facilities at Lancaster. Parents are welcome to come to the Open Day. While here, parents will be given a different talk and tour, tailored to the kinds of things they want to know about, such as accommodation, finance and student support networks.

## Approximate Travel Times (By Train)

Lancaster — London	2.5 hours
Lancaster — Liverpool	1.5 hours
Lancaster — Manchester	1 hour

- Main Airport
- Main Ferry Port
- Heliport (Penzance)
- Major Cities
- Lancaster Railway Station
- Major Roads





Further information about the University in general, accommodation or the city of Lancaster may be found in the University's Undergraduate Prospectus. Paper copies are available via:

**[www.lancaster.ac.uk/prospectus](http://www.lancaster.ac.uk/prospectus)**

The Lancaster University website:

**[www.lancaster.ac.uk](http://www.lancaster.ac.uk)**

### **Contacting the Admissions Staff:**

For all degree programmes offered in this brochure please contact: The Undergraduate Admissions Coordinator.

Tel: +44(0) 1524 593265

E-mail: [bioladmit@lancaster.ac.uk](mailto:bioladmit@lancaster.ac.uk)

### **Postal address:**

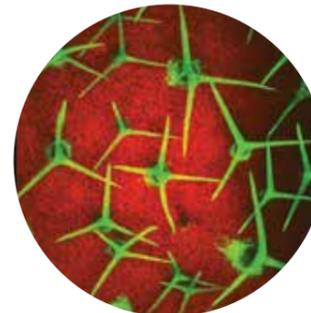
Division of Biomedical and Life Sciences

Faculty of Health and Medicine

Lancaster University

Lancaster

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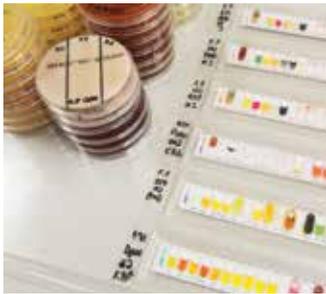
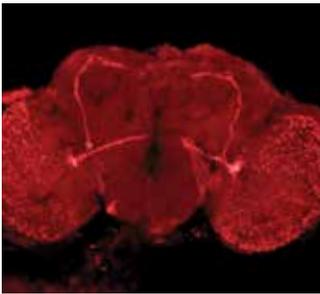
The Biomedical and Life Sciences website:

**[www.lancaster.ac.uk/biomedical-life-sciences](http://www.lancaster.ac.uk/biomedical-life-sciences)**

### **Disclaimer**

The information provided in this brochure is correct at the time of publication (August 2014) but this may be subject to change as we constantly review and improve our degree programmes. This brochure does not form part of any contract between any person and the University of Lancaster.

# Biomedical and Life Sciences



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