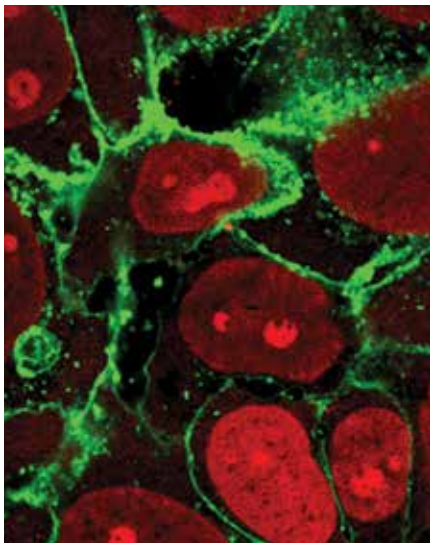
Biomedical and Life Sciences | LANCASTER UNIVERSITY

Biomedical and Life Sciences

Biochemistry

Undergraduate Prospectus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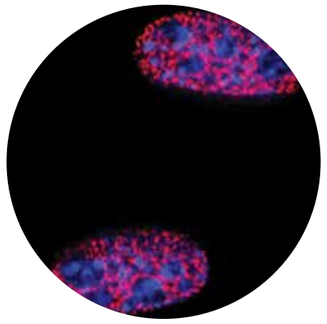
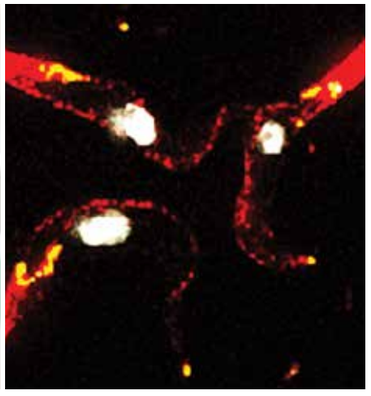




Welcome to **Lancaster**

Why study **Biochemistry?**

At Lancaster we run a range of world-class degree schemes in biochemistry, biomedicine and biological sciences that are fundamental to many of the important issues facing human society today and which are at the forefront of worldwide research efforts. 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, arthritis, environmental and microbiological health, corneal disease, Parkinson's disease, trypanasomal and tropical diseases, ageing, and inflammatory bowel disease. Such a diversity of research areas and our strong link with the Department of Chemistry makes the top rated Division of Biomedical and Life Sciences at Lancaster the ideal choice for biochemistry degrees. Studying one of our degrees provides you with the opportunity to receive a thorough grounding in the principles and issues of biology and chemistry, and training in the key techniques associated with modern biochemistry 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 biochemistry 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 Chemistry at Lancaster. The chemistry modules in your Biochemistry degree are taught by staff in our new state of the art Department of Chemistry. Staff come from a variety of research backgrounds and have interests spanning many areas of chemistry, including many biologically relevant areas.

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

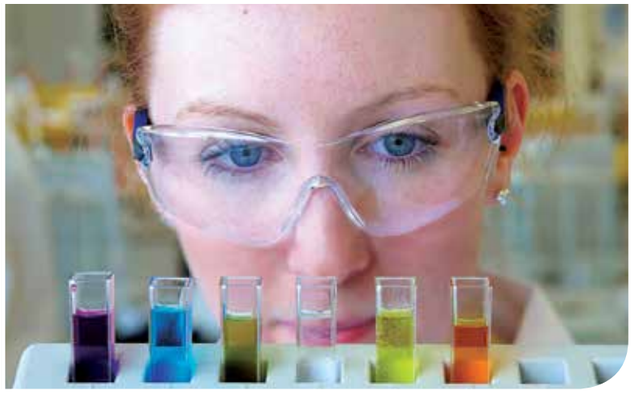
Research Excellence in the Division of Biomedical & Life Sciences

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.

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:

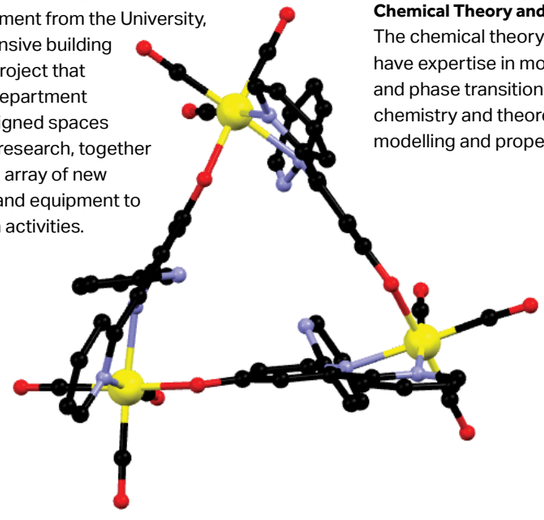
- **Cancer Biology and DNA Repair** - Research groups are investigating a number of different aspects of the molecular and cellular biology of cancer including: cellular effects of exposure to carcinogens and ultraviolet light, DNA repair mechanisms, cell cycle control, and the molecular events leading 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.

State of the Art New Chemistry Department



The chemistry modules in your Biochemistry degree are taught by the Department of Chemistry. Staff in the Department of Chemistry come from a variety of research backgrounds and thus have interests spanning many areas of both fundamental and contemporary interest, including many biologically relevant areas. Perhaps most importantly, they share a common ground in research excellence, an inclusive and collaborative spirit, and a dedication to passing on their knowledge and passion for chemistry to a new generation of researchers.

This is an exciting time to be involved with chemistry at Lancaster. The recently-founded Department of Chemistry boasts an expanding team of research-active academic staff at the forefront of research in their respective fields. It benefits from a significant investment from the University, including an extensive building redevelopment project that will provide the Department with custom-designed spaces for teaching and research, together with an extensive array of new instrumentation and equipment to support research activities.



Research within chemistry at Lancaster is roughly structured around three core themes:

Synthetic Chemistry
Our synthesis research section is the largest in the Department, and brings together research groups with expertise in molecule and material synthesis, design and characterisation, such as bioimaging; organic synthesis; catalysis; polymers; liquid crystals; and supramolecular chemistry.

Analytical Chemistry and Spectroscopy
This section collects our research groups with particular expertise in the chemical and physical properties of molecules and materials, such as solid-state NMR; spectroscopy of biological systems; electrochemistry and microfluidics; energy and photovoltaics.

Chemical Theory and Computation
The chemical theory and computation research groups have expertise in molecular simulation, molecular assembly and phase transitions in solids and soft matter; quantum chemistry and theoretical spectroscopy; materials modelling and property simulation.

Degree Programmes in the Division of Biomedical and Life Sciences

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

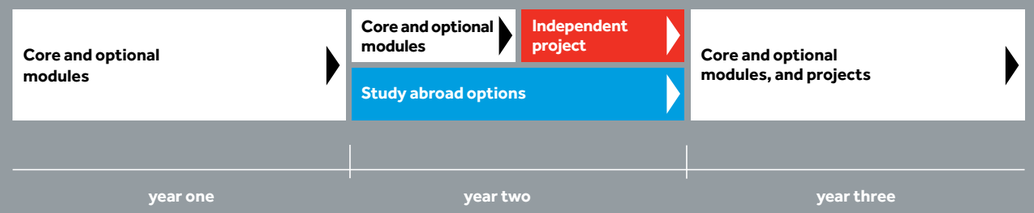
- Biomedical Science: BSc Hons
- Biomedicine: BSc Hons/MSci
- Biomedicine: BSc Hons/MSci Study Abroad
- Biochemistry: BSc Hons
- Biochemistry: BSc Hons Study Abroad
- Biochemistry with Biomedicine: BSc Hons
- Biochemistry with Genetics: BSc Hons
- Biological Sciences with Biomedicine: BSc Hons
- Biological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

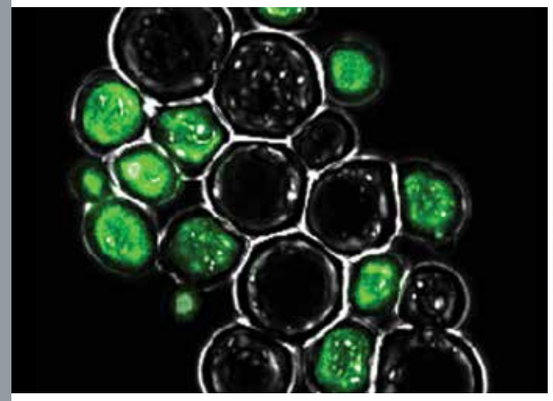
Opportunities for Study Abroad

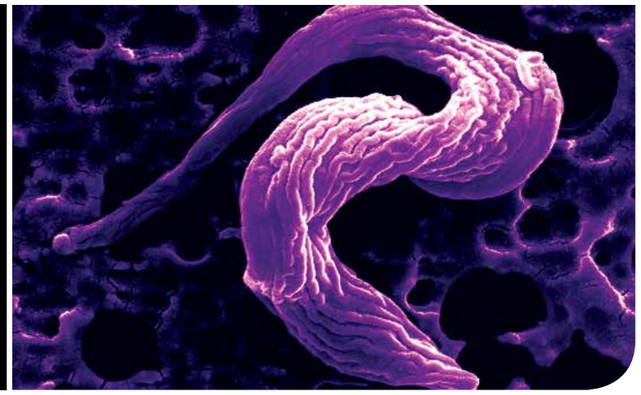
The second year of the Study Abroad scheme is spent at one of our partner universities. These international options are still 3 year courses, with marks from the year abroad counting towards your final degree – so this is not an additional year, but one which offers exciting academic and social opportunities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

The Degree Structure



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. You will carry out your lab work in the third term of your second year and then complete your dissertation in the first term of your third year. 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:

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

Matharu B., Gibson G., Parsons R., Huckerby T.N., Moore S.A., Cooper L.J., Millichamp R., Allsop D. & Austen B. (2009) Galantamine inhibits beta-amyloid aggregation and cytotoxicity. J Neurol. Sci. 280, 49-58.

Delury, C., Tinker, C., Rivers, S., Hodges, M., Broughton, S. & Parkin, E. Differential regulation of E-cadherin expression by the soluble ectodomain and intracellular domain of jagged1 (2013) International Journal of Biochemistry Research and Review. 3, 4, p. 278-290

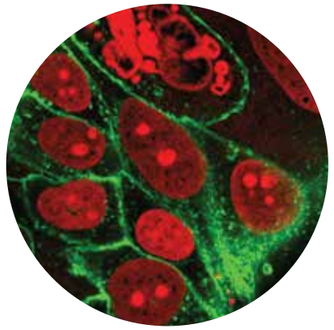
Whiteside, J. R., Box, C. L., McMillan, T. J. & Allinson, S. L. (2010) Cadmium and copper inhibit both DNA repair activities of polynucleotide kinase. DNA Repair. 9, 1, p. 83-89

Roberts SK, McAinsh M, Cantopher H, Sandison S (2014) Calcium Dependence of Eugenol Tolerance and Toxicity in Saccharomyces cerevisiae. PLoS ONE 9(7): e102712. doi:10.1371/journal.pone.0102712

Foulds, P, Davidson, Y, Mishra, M, Hobson, DJ, Humphreys, KM, Taylor, M, Johnson, N, Weintraub, S, Akiyama, H, Arai, T, Hasegawa, M, Bigio, EH, Benson, FE, Allsop, D & Mann, DMA (2009) 'Plasma phosphorylated-TDP-43 protein levels correlate with brain pathology in frontotemporal lobar degeneration' Acta Neuropathologica, vol 118, no. 5, pp. 647-658.

Biochemistry

BSc Hons. UCAS Code: C700
BSc Hons (Study Abroad). UCAS Code: C702


The Biochemistry degree examines the structure and function of living organisms at the molecular level. It is an exciting and rapidly developing subject and the primary investigative science within biology and medicine. The course provides students with core modules in Biochemistry coupled to a solid background in other related fields such as genetics and cell biology. This training in all aspects of Biochemistry is important when considering the multidisciplinary and interactive nature of today's scientific work environments. In the later parts of the course students can choose modules, techniques courses and projects in specialised areas of Biochemistry to suit their own interests.

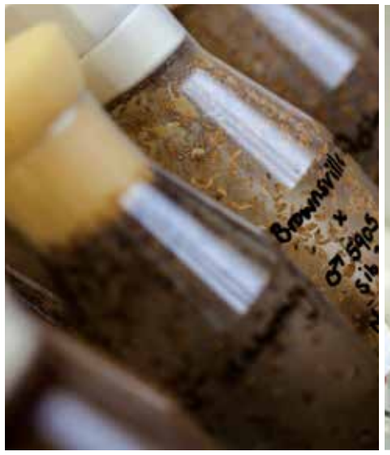
The first year of your Biochemistry degree involves core modules such as Protein Biochemistry, Cell Structure and Function, and Genetics - all designed to give you a good overview of key modern biochemical concepts. However, at the same time, the first year of your degree still permits flexibility as you will also be able to choose an additional four modules from any of the Bioscience subjects on offer.

In the second year of your course, you'll focus on a range of Biochemistry modules, including Cell Biology and Medical Microbiology, as well as some more practically oriented modules designed to equip you with the laboratory skills and knowledge required by a successful biochemist.

In the third year you have the flexibility to tailor your final year to your biochemical interests and can select from a diverse range of subjects including Cell Signalling, Cancer, Biology of Ageing, and Neurobiology.

Study Abroad

The Biochemistry BSc degree 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 BSc 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.


DEGREE STRUCTURE

YEAR 1

(Compulsory modules)
Molecules of Life
Cell Structure & Function
Genetics
Biotechnology
Protein Biochemistry
Impact of Microbes
Skills in Biomedical & Life Sciences
Experimental Design & Data Analysis
Physical Chemistry for Life Sciences
Organic Chemistry
Spectroscopy & Bio-inorganic Chemistry
(Example optional modules, three selections)
Biomedicine & Society
Hormones & Development
Anatomy & Tissue Structure
Variety of Life
Aquatic Ecology
Human Physiology
Introduction to Epidemiology
Infection & Immunity

YEAR 2

(Compulsory modules)
Biochemistry
Biochemical Techniques
Cell Biology
Cell Biology Techniques
Medical Microbiology
Microbiological Techniques
Genetics
DNA Technology
Research Project

YEAR 3

(Compulsory modules)
Research Project
Protein Biochemistry
Molecular & Biochemical Parasitology
Enhancing your Employability & Career Potential
(Optional modules, one selection)
Cell Cycle & Stem Cells
Cancer
Ethics in Biomedicine
Transition Metal Chemistry
(Optional modules, one selection)
Environmental Pathogens
Biology of Ageing
Organic Photochemistry
(Optional modules, three selections)
Cell Signalling
Cell Signalling, Transport & Disease
Genetics
Medical Genetics
Immunology
Tropical Diseases
Neurobiology
Electrochemistry & Kinetics
Phase Equilibria & Thermodynamics

Biochemistry with Biomedicine

BSc Hons. UCAS Code: BC79

The Biochemistry with Biomedicine degree examines the structure and function of living organisms at the molecular level similarly to the Biochemistry degree. However, it is aimed at students who are interested in how the molecular processes of life are altered by disease. It also involves the study of how the knowledge of biochemistry can be used to develop treatments for such diseases. The course will involve core subjects in biochemistry and biomedicine and also other subjects such as cell biology, genetics and physiology which are at the heart of modern biochemical and medical research. We have extensive links with hospitals, at the local and national level, both in research activities and in the teaching on some of the more biomedical based courses.

DEGREE STRUCTURE

YEAR 1

(Compulsory modules)
Molecules of Life
Cell Structure & Function
Genetics
Biotechnology
Protein Biochemistry
Impact of Microbes
Skills in Biomedical & Life Sciences
Experimental Design & Data Analysis
Physical Chemistry for Life Sciences
Organic Chemistry
Spectroscopy & Bio-inorganic Chemistry
Hormones & Development
Human Physiology
Infection & Immunity
(Example optional modules, one selection)
Biomedicine & Society
Anatomy & Tissue Structure
Variety of Life
Aquatic Ecology
Introduction to Epidemiology

YEAR 2

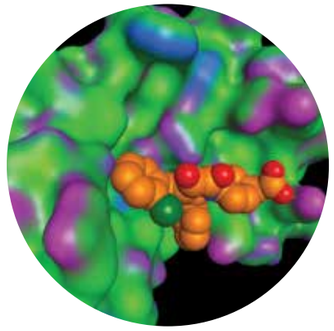
(Compulsory modules)
Biochemistry
Biochemical Techniques
Cell Biology
Cell Biology Techniques
Medical Microbiology
Microbiological Techniques
Genetics
DNA Technology
Research Project

YEAR 3

(Compulsory modules)
Research Project
Protein Biochemistry
Molecular & Biochemical Parasitology
Enhancing your Employability & Career Potential
Ethics in Biomedicine
Immunology
(Optional modules, one selection)
Environmental Pathogens
Biology of Ageing
Organic Photochemistry
(Optional modules, two selections)
Cell Signalling
Cell Signalling, Transport & Disease
Genetics
Medical Genetics
Tropical Diseases
Neurobiology
Electrochemistry & Kinetics
Phase Equilibria & Thermodynamics

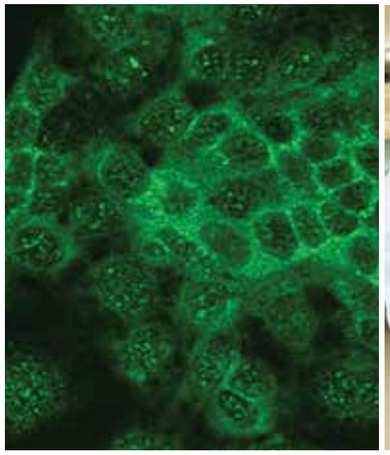
Biochemistry with Genetics

BSc Hons. UCAS Code: C7C4



The Biochemistry with Genetics degree is aimed at students who wish to study Biochemistry, thus developing an in-depth understanding of the molecular mechanisms of life, but want the focus of those studies to be on the study of the genetic blueprint of life, DNA. This is an exciting and rapidly expanding field which has been at the forefront of many of the modern advances in biology and medicine.

The degree structure provides students with core modules in Biochemistry and Genetics coupled to a solid background in other related fields such as biotechnology and cell biology. This basic training in other aspects of Biochemistry is important when considering the multi-disciplinary and interactive nature of today's scientific work environments. Students also receive an in-depth training in the key techniques associated with modern biochemical and genetic research by taking a series of specialist techniques courses.



DEGREE STRUCTURE

YEAR 1

(Compulsory modules)
Molecules of Life
Cell Structure & Function
Genetics
Biotechnology
Protein Biochemistry
Impact of Microbes
Skills in Biomedical & Life Sciences
Experimental Design & Data Analysis
Physical Chemistry for Life Sciences
Organic Chemistry
Spectroscopy & Bio-inorganic Chemistry
Anatomy & Tissue Structure
Human Physiology
Infection & Immunity
(Example optional modules, one selection)
Biomedicine & Society
Hormones & Development
Variety of Life
Aquatic Ecology
Introduction to Epidemiology

YEAR 2

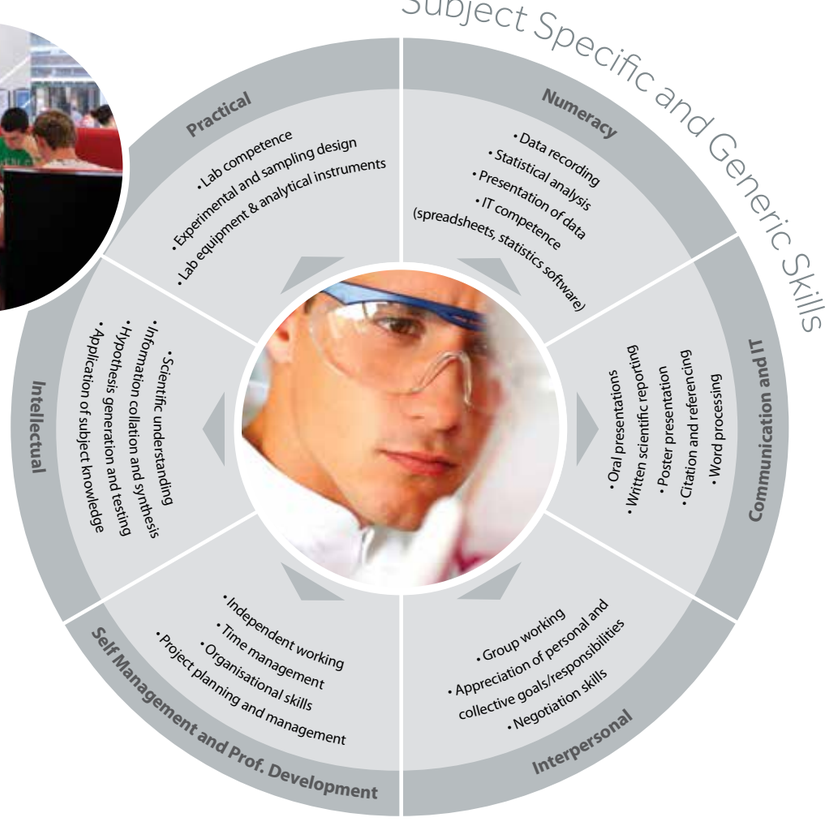
(Compulsory modules)
Biochemistry
Biochemical Techniques
Cell Biology
Cell Biology Techniques
Medical Microbiology
Microbiological Techniques
Genetics
DNA Technology
Research Project

YEAR 3

(Compulsory modules)
Research Project
Protein Biochemistry
Molecular & Biochemical Parasitology
Enhancing your Employability & Career Potential
Biology of Ageing
Genetics
Medical Genetics
(Optional modules, one selection)
Cell Cycle & Stem Cells
Cancer
Ethics in Biomedicine
Transition Metal Chemistry
(Optional modules, one selection)
Cell Signalling
Cell Signalling, Transport & Disease
Immunology
Tropical Diseases
Neurobiology
Electrochemistry & Kinetics
Phase Equilibria & Thermodynamics

Studying **Biochemistry**

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.



Opportunities for Overseas Study

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.

What Do Our Students Think?

Jenny Daniel
BSc (Hons) Biochemistry

The Biomedical and Life Sciences Department at Lancaster has lived up to and exceeded my expectations! Throughout my degree the staff have been incredibly helpful and always on hand to help. The practical sessions complement the lectures allowing me to get a better understanding of what was learnt during the lecture. I loved the range of modules on offer and this was one of the main reasons why I chose Lancaster.

The university is campus based so everything you need is right on your doorstep. There are a wide variety of activities on offer, something to suit everyone. Being one of only a few universities in the UK to have a collegiate system this allows you to feel part of a community which naturally sparks a touch of competition between colleges.

Lancaster is a small but perfectly formed city with plenty of shops, bars, clubs and restaurants within walking distance from the university making it a great all round place to study.

Mark Newsome
BSc (Hons) Biochemistry

I chose Lancaster because I knew the university was highly rated for its research led teaching and I liked the layout of a campus university with everything on site being a short walk from the accommodation. I most liked the community feel that the university had through the collegiate system. The tutors in the department were always helpful and willing to give help to students that were struggling with any issues.

I enjoyed the practical based work in each module and the research based dissertation, as it gave me a chance to get into a laboratory environment and develop more practical skills. In the future I would like to become a clinical biochemist in hospital labs. Lancaster has helped me develop both the academic and personal skills that I need for the training scheme.

Lancaster is a great small city, there are lots of scenic places with it being so close to the Lake District, and I had lots of great nights out there, especially at Sugarhouse, the student union nightclub.

Jonathan Longden
BSc (Hons) Biochemistry

For me, choosing Lancaster came down to two things: the University's academic reputation, but equally, practical considerations like location, accommodation and the overall feel of the University. Lancaster seemed to fit the bill perfectly in every area, standing well in University league tables generally, and specifically in terms of biological sciences as a department. Lancaster surpassed all of my expectations academically and otherwise, I've enjoyed some incredibly valuable experiences that I'm confident I wouldn't have had at any other University. The support network is very well-established also; I really felt I could rely on staff for support in terms of my studies, but also for pastoral and career-based advice. The very best thing about the teaching at Lancaster is the quality of the material. I've often found myself in a lecture with a leading figure in the area being taught, who's made reference to research published only months before. The content is certainly very up-to-date and research-led. My eventual career goal is to become a clinical biochemist as a part of an NHS pathology team. My course has been particularly well-suited to this, especially the integrated employability module which helped me explore the sector in great depth. After three years here, including two living and working in the city, I'll certainly miss not only the University, but the city also. I couldn't recommend Lancaster highly enough; I wouldn't have had my three years here any other way!

Jonathan Whitchurch
BSc (Hons) Biochemistry with Genetics

I liked the idea of a campus-based university, where everything you needed was on the same site, but also the town wasn't far away. On the open day, the university had a friendly atmosphere and I was impressed with all the facilities available; it's safe to say I have no regrets coming to Lancaster! Having the opportunity to complete a dissertation in my final year was definitely a highlight, even though it wasn't easy! It allowed me to put the practical skills I had learned throughout my degree into practice and gave me an experience of research alongside other members of the university. The helpfulness of the lecturers, combined with the choice of modules, undoubtedly contributed to me successfully gaining my degree and has helped me to choose a career I will enjoy. As a result, I'm planning on doing a PhD and going into genetic research. Lancaster University has definitely left me with some great memories!

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.

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 the 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.

In addition to equipping students to enter research based careers, our Biochemistry 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
- 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.

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 Biochemistry 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

Degree programme UCAS codes

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)

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: 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

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
Telephone enquiries can be made to UK Student Recruitment and Outreach Team on: 01524 593724.

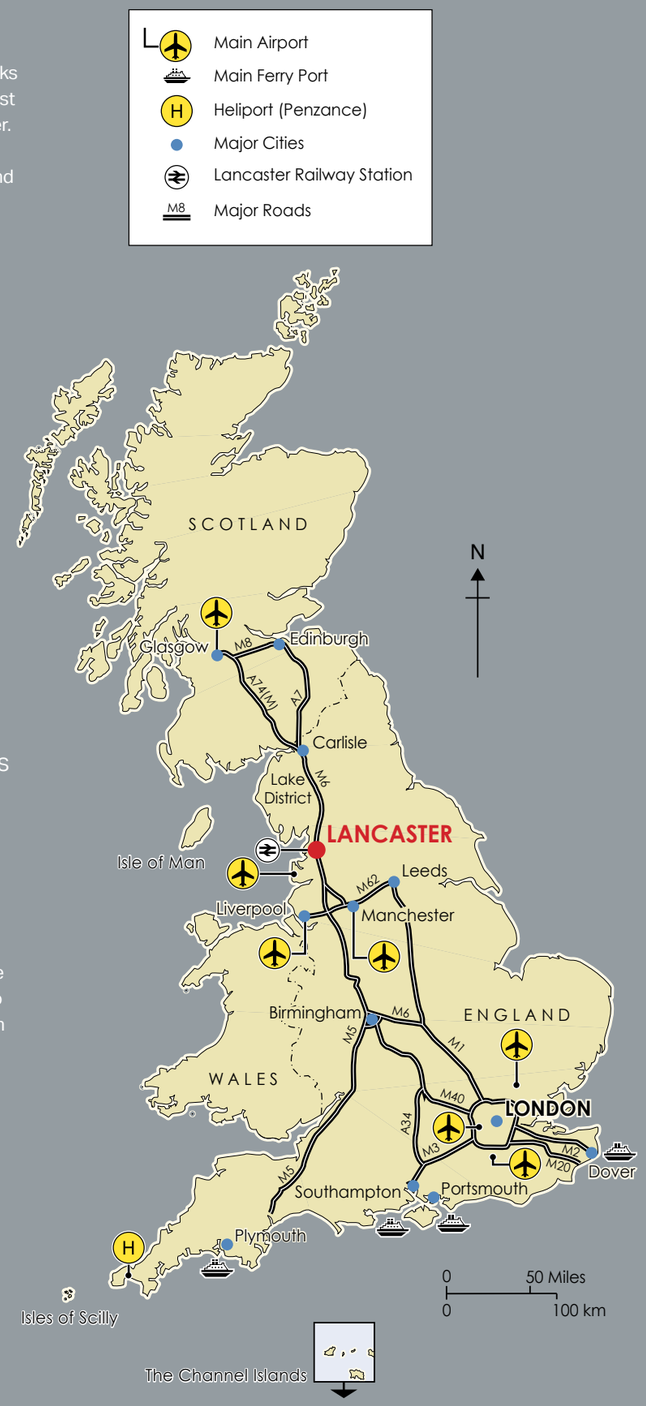
If you would like to visit the University informally, you are welcome to do so at any time. You do not have to advise us of your visit; the campus is like a small town and you are welcome to use the shops, Sports Centre, bars and restaurants and to visit the Library. Please contact the admissions coordinator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

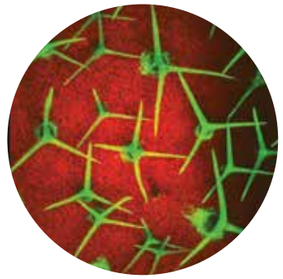
Approximate Travel Times (By Train)

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



Notes

Further Information and Contacts



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

The Lancaster University website:

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

Postal address:

Division of Biomedical and Life Sciences
Faculty of Health and Medicine
Lancaster University
Lancaster
LA1 4YG

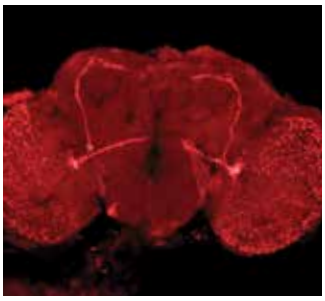
The Biomedical and Life Sciences website:

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




www.lancaster.ac.uk/biomedical-life-sciences