School of Life Sciences

BIOLOGICAL SCIENCES
BIOCHEMISTRY
BIOMEDICAL SCIENCE

UNDERGRADUATE STUDY 2017
Welcome

We offer you a warm welcome at the School of Life Sciences. We pride ourselves on our excellent teaching, delivered by inspiring teachers and world-leading academic researchers. We are particularly proud that all our courses are accredited by the Royal Society of Biology, the leading professional body for Biological Sciences in the United Kingdom.

Through our teaching and your learning you will be introduced to key academic principles and techniques that enable the fantastic diversity of life on our planet to be understood. Our modules range from the subcellular to the population, from experimental chemistry to theoretical modelling, physiology, disease and the environment. You will learn in a variety of settings; tutorials, lectures, workshops, practicals and private study. Our degrees are flexible and enable you to tailor your choices to your interests.

We develop your future potential right from the start of your degree not only through academic development but also through development of key personal skills that provide the basis for employment in a wide range of sectors.

Warwick recognizes the importance of extracurricular activities and provides excellent facilities to enable you to make the most of your degree. Our campus sports facilities are used extensively by University clubs and individuals and our Students’ Union offers over 250 student societies.

Please read our brochure and visit our website to discover the many opportunities awaiting you at Warwick. We look forward to welcoming you to one of our Open Days soon.

Laura Green
Head of School

"The first year induction was very inspiring and got me in the right frame of mind for study. The lecturers were very enthusiastic and welcoming."

Bukunmi Omitogun
Biomedical Science
Research-led Teaching and Learning in the School of Life Sciences

As a Life Sciences student you will benefit from a high number of contact hours with the School’s active academic staff and close supervision throughout your course. You will learn through a combination of tutorials, lectures, laboratory work, and independent and group research.

Tutorials
You will have weekly (Year 1) or fortnightly (Years 2 and 3) taught tutorials with your personal tutor. These sessions with groups of about six students ensure that everyone is able to develop, engage and receive regular feedback on their work. In tutorials you will complete a range of assignments including problem sets, essays, question and answer sessions and formal presentations. This regular contact with your personal tutor throughout your course provides one-to-one support for your academic work. Your personal tutor stays with you throughout your degree and is your first point of call for any academic queries or concerns.

Laboratories & Learning Suite
You will have a significant quantity of high quality laboratory time, providing you with the time to develop your laboratory skills. Labs are designed to follow on from the relevant lectures in order to help you to understand the application of scientific theory in practice.

The Interactive Computational Learning Suite, or ‘Orchard’ contains 120 Apple iMac computers. Learning in the suite gives you the opportunity to develop a high standard of bioinformatics and computational skills, which add to your employability.

Assessment
Each degree is assessed in a variety of ways. Students submit course work in the form of multiple choice tests, essays and poster presentations.

Each lab ends with the writing up of an assessed laboratory report.

Banke Adeleke
Biomedical Science

I like the fact that we stay with the same tutor and tutorial group throughout our degree. It is a great way to build a personal relationship with an academic.

Daniel Cooper
Biochemistry

My favourite part of the course has been the lab classes. Getting to actively perform the experiments described in lectures and observing how results are obtained in a real life setting is both intuitive and interesting. The opportunity to put theory into practical applications helps simulate an industry setting.
Ensuring your Success

We provide a supportive and stimulating learning environment, which enables you to take advantage of the many opportunities available to you.

Senior Tutors
Each year group has a Senior Tutor. As a team, the Senior Tutors are responsible for the welfare of students in the department, which means they support you to benefit from your Warwick experience.

Pre-Med Support
If you are interested in applying for graduate entry medicine you will have access to our successful Pre-Med Support programme.

A Year in Industry
If you wish to take a year out from any degree to gain industrial experience in any science-related area we will offer support and guidance to help you.

Quantitative Biology Centre (QuBiC)
All Life Sciences degrees require good quantitative skills. To support students to develop the mathematical and statistical skills required, the School of Life Sciences runs QuBiC, a daily drop-in service for all students to use to support the quantitative content in their degree.

Student Staff Liaison Committee (SSLC)
The Student Staff Liaison Committee is made up of student representatives from all undergraduate courses and members of staff. The committee provides a space for students to discuss anything related to teaching, learning and student support at the University. The SSLC is one of the ways in which students can get involved in the running of the School.

BioSoc - the University’s Biology Society
A student run society open to all years helping everyone to make the most of their time as a Life Sciences student. BioSoc run weekly Peer Support sessions offering advice and guidance and a range of volunteering opportunities from teaching in schools to charity work. Attending the social events organised by BioSoc is also a great way to meet new people on your course.

BioMed Grid
To support your study you have full access to the BioMed Grid. This is a learning environment for biologists, with text books, careers information, Wi-fi, video editing, SMART boards, plasma screens and presentation rooms.

Science 101
Science 101 is a non-credit rated skills-based module for Year 1 students to help you transition from school to university study. It provides you with the key skills required to enable you to develop as an independent learner.

“I’m really impressed with the SSLC. I found out just how effective they are at dealing with queries raised by students and they really do listen.”

Esther Awodipe
Biomedical Science

“...The BioMed Grid is a fantastic learning environment, well equipped for both individual and group work. It contains all the important books for wider reading, as well as equipment such as projectors and interactive whiteboards, ideal for group work and practising presentations. The ICL Apple Suite is also an excellent resource for analysing data.”

Daniel Cooper
Biochemistry

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“The School of Life Sciences received a score of 94% for overall student satisfaction in the NSS (National Student Survey) 2016.
School of Life Sciences

Careers

As a Warwick graduate you will be highly employable. Our Royal Society of Biology accredited degrees with their high academic content have a strong reputation with employers. We work with students from the outset to develop the skills demanded by today’s employers and develop careers for life.

The Centre for Careers & Skills offers a number of programmes and sessions to assist your personal development. In addition, the School has a dedicated careers adviser, offers career-focused tutorials and runs network events with past students and relevant employers to help your career decisions.

What can I do with a Degree in Life Sciences?

Our graduates have careers in a wide range of sectors including:
- Bioscience and Biomedicine
- Research and Development
- Medicine
- Scientific Publishing
- Public Health
- Business
- Accountancy and Finance
- Law
- Computing
- Media
- Civil Service
- Wildlife Conservation

Many of our students go on to postgraduate study doing a Master’s or PhD or gaining entry to a graduate medical school programme.

Employer destinations include:
- GlaxoSmithKline
- NHS
- Teach First
- Diabetes UK
- AstraZeneca
- Public Health England
- Oxford Biomedica
- KPMG
- Taylor and Francis Scientific Publishing
- RAGT Seeds

Warwick’s excellent reputation and opportunities for experience in the lab made me desirable to employers. My employer saw in me a willingness to learn and an interest in science whose cultivation started at Warwick.

Larissa Butler
Biochemistry with Intercalated Year

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- Taylor and Francis Scientific Publishing
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87% of MBio students graduated with a First Class Degree in 2016

94% of all 2015 Life Sciences graduates were in work or study six months after graduation
Degree Courses in the School of Life Sciences

- Biological Sciences BSc (C100) MBio (C1A1)
- Biochemistry BSc (C700) MBio (C1A2)
- Biomedical Science BSc (B900) MBio (C1A3)

All of our undergraduate degrees are accredited by the Royal Society of Biology (RSB) and our MBio degrees hold advanced accreditation. RSB accredited degrees undergo rigorous, independent assessment to ensure a solid academic foundation in biological knowledge and key skills and prepares graduates to address the needs of employers.

Our four-year integrated Masters (MBio) courses provide an additional year of study focused on a substantial research project, either within the School or industry. You can apply directly for the MBio courses and you are guaranteed a place on the BSc courses if you do not achieve MBio entry requirements but do achieve them for the BSc. Alternatively, if you are a BSc student and you achieve 2:1 or above in your second year, you can apply for a transfer onto the related Master’s course (transfers are subject to visa requirements for international students).

An MBio degree will give additional skills to boost your employability, because it provides the academic and transferable skills desired by employers, for example in project management.

Year 1 Modules typically include:
- Molecules, Cells and Organisms, Animal and Plant Biology, Agents of Infectious Disease, Physiology and Metabolism, Environmental Biology and Quantitative Skills for Biology.
- (Chemistry for Biologists is compulsory for entrants without A2 level Chemistry).

Year 2 Modules typically include:
- Molecular Cell Biology, Multicellular Systems, Genetics and Evolution, Ecology and Environment, plus one option from the following: Immunology, Protein Structure and Function, Clinical Microbiology, Ecology and its Applications, and Pharmacology.

Year 3 Modules typically include:
- Research Project, Dynamics of Biological Systems plus options such as Advanced Immunology, Protein Targeting, Oncology, Biological Clocks, Integrative Neuroscience, Exploiting Innovation in Biology, Environmental Science and Management, Principles of Development, Bioenergy and Biorefining, Extreme Environment Biology, Synthetic Biology, One World Health, Bacteria: Genes to Behaviour, Science Communication and interdisciplinary Business Studies modules.

Year 4 Modules (for MBio students):
- Extended Research Project (six months if based in the department or one year as an industrial placement). Research Skills, training in advanced laboratory techniques, data handling and statistical analyses, critical analysis of the literature and designing research proposals.

An MBio degree will give additional skills to boost your employability, because it provides the academic and transferable skills desired by employers, for example in project management.

Biological Sciences BSc (C100) MBio (C1A1)
This course spans the entire scale of biological systems - from molecules to ecosystems. It offers broad exposure to cutting-edge research in molecular, cellular and whole organism biology, while describing applications of science to major global challenges such as environmental management, food security, biotechnology and human health. The exceptionally wide range of options within the Biological Sciences degree allows you to choose the modules that are best suited to your interests and career ambitions.

Biological Sciences BSc (C100)
This is a very broad course that offers the chance to explore multiple aspects of Life Sciences; to find the area you like the best and introduce you to things you’d not thought to explore.
Biochemistry BSc (C700) MBio (C1A2)

Following an in depth foundation in biochemistry, the course broadens out to allow you to focus on more specialist fields. These include biophysical chemistry, which covers biological macromolecules at the atomic level, and understanding the genome and gene regulation.

By the third year, optional modules provide you with the opportunity to pursue areas that you find particularly interesting.

Students leave Warwick with a solid background in the biochemical and structural basis of molecular, cellular and developmental processes in a variety of organisms ranging from bacteria to animals.

Year 1 Modules typically include:
Molecules, Cells and Organisms, Agents of Infectious Disease, Physiology and Metabolism, Physical Chemistry, Quantitative Skills for Biology and Organic Chemistry.

Year 2 Modules typically include:
Molecular Cell Biology, Signalling and Integration in Health and Disease, plus options such as Neurobiology, Immunology, Evolution, Ecology and its Applications and Genetics and Genomics.

Year 3 Modules typically include:
Research Project, Protein Targeting, Structural Molecular Biology, Principles of Development, Dynamics of Biological Systems, plus options such as Advanced Immunology, Oncology, Biological Clocks, Integrative Neuroscience, Bioenergy and Biorefining, Extreme Environment Biology, Synthetic Biology, Science Communication and interdisciplinary Business Modules.

Year 4 Modules (for MBio students):
Extended Research Project (six months if based in the department or one year as an industrial placement). Research Skills, training in advanced laboratory techniques, data handling and statistical analyses, critical analysis of the literature and designing research proposals.

Matthew Roberts
Biochemistry

The lecturers have a genuine passion for the material they teach. They are always more than happy to discuss aspects of their modules that are more difficult to understand.

Biomedical Science BSc (B900) MBio (C1A3)

Biomedical Science involves the study of life processes in humans and provides an understanding of the causes and consequences of human and animal disease, including infection, cancer and neurological decay. The application of new biological concepts in medicine is an ever-growing and exciting process. Developments in molecular, genetic and cellular biological research continue to drive progress in areas ranging from vaccine development to neurodegenerative diseases and metabolic diseases such as diabetes. Drawing on a spectrum of modules, you will come to understand the nature and extent of human and animal disease, both locally and globally.

Year 1 Modules typically include:
Molecules, Cells and Organisms, Agents of Infectious Disease, Physiology and Metabolism, Quantitative Skills for Biology plus at least one option from Animal Anatomy and Histology, Health and Community and Environmental Biology. (Chemistry for Biologists is compulsory for entrants without A2 level Chemistry).

Year 2 Modules typically include:
Molecular Cell Biology, Tools for Biochemical Discovery, Protein Biochemistry, Signalling and Integration in Health and Disease, plus options such as Neurobiology, Immunology, Evolution, Ecology and its Applications and Genetics and Genomics.

Year 3 Modules typically include:
Research Project, Protein Targeting, Structural Molecular Biology, Principles of Development, Dynamics of Biological Systems, plus options such as Advanced Immunology, Oncology, Biological Clocks, Integrative Neuroscience, Bioenergy and Biorefining, Extreme Environment Biology, Synthetic Biology, Science Communication and interdisciplinary Business Modules.

Year 4 Modules (for MBio students):
Extended Research Project (six months if based in the department or one year as an industrial placement). Research Skills, training in advanced laboratory techniques, data handling and statistical analyses, critical analysis of the literature and designing research proposals.

Cal Donnelly
Biomedical Science

The Open Day showed me how hands-on the Biomedical Science course is which was the main deciding factor when I chose Warwick.
How to Apply

Applications are made through UCAS. The UCAS code for Warwick is WARWK W20. [ucas.com]

We strongly encourage you to visit the University to see campus for yourself and to get a sense of the student experience at Warwick. You can find details of our main University Open Days online. [warwick.ac.uk/opendays]

Once you have applied and you have an offer you will be invited to an Offer Holders Open Day and will be given the opportunity to talk to academic staff and current students and have a look around the School of Life Sciences and the University. You will also take part in a sample tutorial in order to get a feel of what it might be like to study here.

Successful applicants will be made an offer as soon as possible after their application is received. The offer will be conditional on already having or obtaining the required entry qualifications. If you accept this offer and achieve the required grades in your examinations then your place at the University of Warwick will be confirmed and we will look forward to seeing you at the start of your undergraduate life. [warwick.ac.uk/study/undergraduate/apply]

Overseas Applicants

The University of Warwick welcomes applications from international students. Local advice about the application procedure is available from all British Council offices and Warwick representatives. [warwick.ac.uk/study/international]
Research in the School of Life Sciences

In our state-of-the-art laboratories and facilities, we conduct a broad spectrum of interdisciplinary research based round four themes - Biomedical Science, Biotechnology, Environmental Bioscience and Plant and Crop Science. These themes extend from the molecular, through the cellular to the organism and span bacteria, viruses, fungi, animals and plants. Our research has applications for many important areas in society and is of relevance to key employment sectors for the future Life Scientist.

As an undergraduate you become part of our research community.

Final Year Project
You will complete a six-week laboratory or data-analysis project in your final year, providing the opportunity to demonstrate independent lab working. You can choose from over 300 general projects and over 100 laboratory-based projects offered by academic staff in a range of diverse research areas. Topics have included; ‘Whether organ donors should get free funerals?’ and ‘The development of a capture-recapture microsatellite system in bats for conservation’. Laboratory-based projects have included; ‘Using microarray data to investigate the function of the circadian clock’ and ‘Investigating the role of phosphorylation of the protein Tau in Alzheimer’s disease’. You will be closely supported by a member of staff and will carry out your research within their group.

Rose Hodgson
Biomedical Science

The Year 3 project was one of the highlights of the course for me, it gave me the opportunity to undertake lab work independently and learn a wide range of lab skills studying an area of science that I found really interesting. It encouraged me to look into further lab-based research for a career and was a good taster for life as an MBio student.

More than 80% of research in the School was rated as ‘world leading’ or ‘internationally excellent’ in the REF 2014 assessment.

Integrated Master’s Degree (MBio)
As part of our MBio degrees you spend a major part of your fourth year undertaking a substantial laboratory research project. This can be within one of the School’s research laboratories or alternatively you can work on a project in industry. Recent examples of industrial placements include GlaxoSmithKline, the Health Protection Agency, AstraZeneca and Unilever.

Reinvention
Reinvention: A Journal of Undergraduate Research is an online, peer-reviewed journal, dedicated to the publication of high-quality undergraduate student research. The journal is edited jointly by students from Warwick and Monash University in Australia.

The Undergraduate Research Support Scheme
This scheme offers opportunities for undergraduates to gain an insight into research work and to develop valuable transferable skills. Bursaries are available through the scheme, which enables students to gain experience in our research labs.

The International Conference of Undergraduate Research
Led by the University of Warwick and Monash University, ICUR is an exclusively undergraduate forum designed to showcase the very best in undergraduate research from across the globe and provides participants with the opportunity to present their work to an international and interdisciplinary audience.

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Useful Information

Student fees and funding
The University wants to ensure that, wherever possible, financial circumstances do not become a barrier to studying at Warwick. We provide extra financial support for qualifying students from lower income families.

Accommodation
Warwick Accommodation has over 6,400 rooms across a range of residences. All rooms are self-catering. Each of the campus residences is fully managed and has an excellent network of support staff in the Residential Life Team.

Helping you find the right career
You will have access to specialist Life Sciences careers advice and opportunities to speak with graduate recruiters, through our Centre for Careers and Skills.

Warwick Students’ Union
One of the largest and most active students’ unions in the country, Warwick SU is the focal point of campus life here at Warwick.

Welfare and support
The University has a comprehensive welfare structure in place to ensure that you can easily access advice and guidance throughout your time here.
Contact details
For further information about our undergraduate courses please contact:

Educational Support Services Team
School of Life Sciences
Gibbet Hill Campus
University of Warwick
Coventry CV4 7AL UK

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ug.lifesciences@warwick.ac.uk
@WarwickLifeSci
warwick.ac.uk/uglifesci

Disclaimer
The information in this brochure was correct at the time of printing. Our course, module content and schedule is continually reviewed and updated to reflect the latest research expertise at Warwick, so it is therefore very important that you check the website for the latest information before you apply and when you accept an offer.