Welcome to the School of Life Sciences

The School of Life Sciences provides excellent teaching, delivered by world-class academic researchers. Students are introduced to the key scientific principles and techniques that enable the fantastic diversity of life on our planet to be understood.

Our modules range from the subcellular to the global, from chemistry to modelling, to those that impact on function, physiology, disease and the environment. Our degrees enable you to tailor your module choices to your interests and explore areas for your future career.

Warwick develops your future potential right from the start of your degree. Our research-led teaching ethos and close interaction with academic staff, who are at the forefront of their fields, will help you develop research skills that will provide the basis for employment in a wide range of sectors.

I felt very welcome when I visited the School of Life Sciences. I met friendly people and the staff gave insight into their own research – it was very inspiring!”

Alicia P-Neophytou
Biochemistry student
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 research 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 of small groups of 4-5 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 and research work. Your personal tutor stays with you throughout your degree and is your first point of call for any academic queries or concerns.

“It’s great to build up a relationship with a member of staff who can help and advise you throughout the course.”

Megan Buckley
Biomedical Science

Laboratories
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.

“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.”

Daniel Cooper
Biochemistry

Research Project
You will complete a six-week laboratory or literature-based project in your final year, providing the opportunity to demonstrate independent lab working. All degrees include a research project in the final year. 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. Literature-based 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 in internationally renowned research groups.

“The final year project was one of the highlights of the course for me. It gave me the opportunity to undertake lab work independently and to learn a wide range of skills. It has encouraged me to look into careers in the lab or further research, something I wasn’t interested in before doing my project.”

Laura Sutton
Medical Microbiology and Virology

Interactive Computational Learning Suite
The Interactive Computational Learning Suite, or ‘Orchard’ as students call it, contains 120 Apple iMac computers. The Suite gives you the opportunity to develop a high standard of bioinformatics and computational skills, which will add to your employability.
Ensuring your Success

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

A year in industrial research

As part of our 4-Year MBio Degrees you can spend your fourth year working on a research project in industry. Recent examples of industrial placements have included GlaxoSmithKline, the Health Protection Agency, AstraZeneca and Unilever. If you wish to take a year out to gain industrial experience in any science-related area we will offer support and guidance to help you.

“An industrial placement is an invaluable opportunity to see at first hand what it is like working within an industry setting, with the support of the University and your personal tutor to help guide you.”

Daniel Cooper
Biochemistry

Student Staff Liaison Committee

The Student Staff Liaison Committee (SSLC) 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. Representatives play a key role in collecting and presenting the views of students and in working with academics to respond to student needs.

BioSoc - the University’s Biology Society

Friendly, innovative and open to everyone, the society is a focal point for all biology students. The student led society runs socials and events throughout the year. Being part of BioSoc is also a great way of meeting new people and making friends on your course.

BioMed Grid

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

www.warwick.ac.uk/library/biomed

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 new ICL Apple Suite is also an excellent resource for analysing data.”

Samuel Davies
Biological Sciences
School of Life Sciences Graduates

Warwick graduates are highly employable. This is partly due to the high academic content of our degree courses and the University’s reputation, but also because we encourage students from the outset to take responsibility for developing those skills demanded by today’s employers.

The student experience at Warwick offers you many opportunities to prepare for your future. Our courses help to develop presentation, communication and writing skills, and we can support you to find work experience, which will enable you to apply your knowledge and skills to real life problems. You can also add to your employability by getting involved in Students’ Union clubs and societies. Our Student Careers and Skills Service can support you in many ways – from interview practice to online training courses.

Our graduates have careers in a wide range of sectors, including bioscience and biomedicine, biotechnology and food industries, wildlife conservation, scientific publishing and public health. Others use their degree as a stepping stone towards a career where they make use of other skills and qualities, such as business, accountancy, law, computing, the media and the Civil Service. Many of our students also go on to postgraduate study doing a Masters or PhD or gaining entry to a graduate medical school programme.

“Studying Biochemistry at Warwick was such a rewarding and fun experience. I really appreciated the wide range of module choices in the second and third years, which let you choose subjects that you enjoyed and tailor the course to suit your interests. Following my degree, I chose to read Medicine and my firm grounding in biological science has proven invaluable, allowing me to stay ahead of other graduates on my current course. Many of my fellow classmates will remain lifelong friends and I never regret for a moment choosing Warwick.”

Thomas Robbins
BSc Biochemistry Graduate

“I work in one of the UK’s top digital agencies ‘Think’ as a Senior Strategist. I’ve worked with a very broad range of clients including Warner Brothers and Sony Playstation. Although the vocation I landed is not directly to do with my Biological Sciences degree, that study helped me from an observation and analysis point of view. The course prepared me to absorb huge quantities of information from a variety of sources and apply that knowledge effectively to businesses in any sector.”

Ramzi Yakob
BSc Biological Sciences Graduate
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)
- Medical Microbiology and Virology BSc (C520) MBio (C1A4)

Our degree courses are designed to provide choice and flexibility. We recognise that your interest in particular aspects of biology may develop only when you are more familiar with the subject at university level. A core syllabus is offered in the first year for all degree courses providing the essential foundations in biology, biochemistry, genetics and chemistry. Everyone covers the same core modules in the first year meaning that it is often possible to transfer between the different degrees at the end of the first year.

Our four-year integrated Masters (MBio) courses provide an additional year of study focused on a substantial research project either within the School or in industry (subject to reaching a suitable level of achievement in years 1 to 3). You can apply directly for the MBio courses, or 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 Masters course.

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

For the most up-to-date course information visit our website:
www.warwick.ac.uk/uglifsci

"I have always loved biology and this course offers a broad range of topics across all the biological disciplines. The course also has options to specialise by choosing modules in areas that you enjoy."

Philippa Hirst
Biological Sciences

"When I first started university I was not quite sure what I wanted to do for a career so the breadth of the Biological Sciences course was ideal. I am currently enjoying a placement year at a major pharmaceutical company, with my work based around clinical trials. With this experience and the course being so flexible I am now able to return to university with final year modules tailored to suit a career in the pharmaceutical industry."

Andrew Armstrong
Biological Sciences with placement year

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.

Year 1 Modules:
- Proteins Genes and Genetics, Cells Tissues and Organisms, Agents of Infectious Disease, Quantitative Skills for Biology, Physiology and Metabolism plus options. (Chemistry for Biologists is compulsory for entrants without A2 level Chemistry).

Year 2 Modules:
- Genetics and Evolution, Multicellular Systems, Ecology and Environment, Molecular Cell Biology, plus options such as Immunology, Viruses and Disease, Bioscience and Society, Pharmacology, Biological Oceanography.

Year 3 Modules:
- Research Project, Post-genomics Research plus options such as Advanced Immunology, Infectious Diseases and Health, Biological Clocks, Exploiting Innovation in Biology, Environmental Science and Management, Principles of Development, Science Communication and Business and Law modules.

Year 4 Modules (for MBio students):
- Research Skills, Extended Research Project (either in the department or as an industrial placement) and, for department based students, a choice of MSc taught modules.

Full details can be found at:
www.warwick.ac.uk/uglifsci/courses/biolsci
Biomedical Science involves the study of life processes in humans and provides an understanding of the causes and consequences of human 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 cell 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 disease problems, both locally and globally.

**Year 1 Modules:**
- Proteins Genes and Genetics, Cells Tissues and Organisms, Agents of Infectious Disease, Quantitative Skills for Biology, Physiology and Metabolism, Physical Chemistry, Organic Chemistry.

**Year 2 Modules:**
- Molecular Cell Biology, Bioenergetics and Spectroscopy, Protein Biochemistry, Signalling and Integration in Health and Disease, plus options such as Foundations of Electrochemistry, Genetics and Genomics, Evolution, Bioscience and Society.

**Year 3 Modules:**
- Research Project, Protein Targeting, Structural Molecular Biology, Biophysical Chemistry, Post-genomic Research plus options such as Biological Clocks, Extreme Environment Biology, Integrative Neuroscience, Science Communication, Business and Law modules.

**Year 4 Modules (for MBio students):**
- Research Skills, Extended Research Project (either in the department or as an industrial placement) and, for department based students, a choice of MSc taught modules.

Full details can be found at: [www.warwick.ac.uk/uglifsci/courses/biomedsci](http://www.warwick.ac.uk/uglifsci/courses/biomedsci)

“I really enjoyed biology at school, especially human-related topics. The combination of taught modules with labs and tutorials was very appealing.”

Megan Buckley
Biomedical Sciences

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 permits the descriptions of 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:**
- Proteins Genes and Genetics, Cells Tissues and Organisms, Agents of Infectious Disease, Quantitative Skills for Biology, Physiology and Metabolism, Physical Chemistry, Organic Chemistry.

**Year 2 Modules:**
- Molecular Cell Biology, Bioenergetics and Spectroscopy, Protein Biochemistry, Signalling and Integration in Health and Disease, plus options such as Foundations of Electrochemistry, Genetics and Genomics, Evolution, Bioscience and Society.

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- Research Project, Protein Targeting, Structural Molecular Biology, Biophysical Chemistry, Post-genomic Research plus options such as Biological Clocks, Extreme Environment Biology, Integrative Neuroscience, Science Communication, Business and Law modules.

**Year 4 Modules (for MBio students):**
- Research Skills, Extended Research Project (either in the department or as an industrial placement) and, for department based students, a choice of MSc taught modules.

Full details can be found at: [www.warwick.ac.uk/uglifsci/courses/biochem](http://www.warwick.ac.uk/uglifsci/courses/biochem)

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Megan Buckley
Biomedical Sciences
Microbes are largely responsible for creating the atmosphere and recycling nutrients. They are essential for life on Earth, yet microbes are also the cause of most death and disease globally. Bacteria are found in almost every habitat on earth including polar ice caps, hot water springs, ocean depths and the upper atmosphere, as well as on and inside humans, animals and plants. Viruses such as HIV and influenza are major agents of human disease while other viruses play a role in cancer. The Medical Microbiology and Virology (MMV) course reflects the diversity of microbial form and function to give you a broad understanding of the roles of microbes in life processes.

“I switched to MMV in my second year at Warwick as the course allowed in-depth study of an area of biology that really interested me. It allowed me to learn about everything from how viruses cause disease to bacterial behavioural pathways.”

Laura Sutton
MMV

### How to Apply

Applications are made through UCAS. The UCAS code for Warwick is WARWK W20. www.ucas.ac.uk

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 at [www.warwick.ac.uk/opendays](http://www.warwick.ac.uk/opendays)

Once you have applied you will be invited to an Offer Holders 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.

[www.warwick.ac.uk/study/undergraduate/apply](http://www.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.

[www.warwick.ac.uk/services/international](http://www.warwick.ac.uk/services/international)
Research in the School of Life Sciences

In our state-of-the-art laboratories and facilities, we conduct a broad spectrum of fundamental research that extends from the molecular, through the cellular to the organism level and spans bacteria, viruses, fungi, animals and plants. Our research has applications for many important areas in society and represents key employment sectors for the future Life Scientist.

Development
The understanding of developmental control has been shown to be fundamental for our appreciation of many biological research areas, from basic evolutionary gene control through cancer signalling, immunology, circadian control, to degenerative disease and healthy ageing. Our developmental research addresses these challenges in a variety of organisms.

Environment
Our environmental research focuses on both biodiversity and climate change. Researchers in the School are studying microbial communities in the sea and soil that have important roles in the carbon, nitrogen and sulphur cycles. Studies also cover the emergence of novel pathogens and diseases to plant domestication and climate change.

Food Security
Limited resources, population increase and climate change threaten the ability of the world to feed its population. The School carries out a range of world-leading studies on both plants and animals aimed at ensuring future food production. New, exciting approaches include Systems Biology, which combines computational and experimental methods to provide deeper insight into living processes.

Infection Biology
Infectious disease causes death and suffering for billions of people and their animals. We conduct research at all levels of organisation, from the structure of molecules through cellular processes to populations, in order to know how to control disease more effectively and efficiently, and generate capacity to respond to emerging disease threats.

Molecular and Cell Systems
A major challenge in modern biology is not only to understand how molecular pathways are put together but also to model their outputs when responding to changing cellular or external environments. Our research integrates basic biological research with modelling and bioinformatics to generate and analyse complex datasets and improve experimental design.

Synthetic Biology and Biotechnology
Synthetic biology and biotechnology are at the heart of modern biological science research. Biotechnology uses living systems and organisms for human gain, ranging from production of pharmaceuticals and fertilizers through to food products and biodegradable materials. Synthetic biology merges experimental techniques with engineering principles to redesign existing biological systems or create new ones from scratch.

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.

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.

Protein storage vacuoles in the embryo of Arabidopsis thaliana
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.

www.warwick.ac.uk/study/undergraduate/studentfunding

Accommodation
We have around 6,300 rooms on campus for the 2014/2015 academic year across a range of residences. Each of these is fully managed and has residential tutors and a warden who look after the welfare of students living in their residence.

www.warwick.ac.uk/accommodation

Helping you find the right career
As a Warwick student, you have access to far more than academic qualifications. The Centre for Careers and Skills offers a number of well-established programmes and sessions to assist your personal development. Through the Centre you will have access to specialist Life Sciences careers advice and opportunities to speak with graduate recruiters.

www.warwick.ac.uk/services/scs

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.

www.warwicksu.com

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.

www.warwick.ac.uk/services/student-support-services
Contact details
For further information about our undergraduate courses please contact:

Student and Academic Services Office
School of Life Sciences
Gibbet Hill Campus
University of Warwick
Coventry CV4 7AL UK

Tel: +44 (0)24 7652 3508
Email: ug.lifesciences@warwick.ac.uk
Web: www.warwick.ac.uk/uglifesci

Disclaimer
The information in this brochure is correct at the time of publishing but may be subject to change. For the most up-to-date course information visit our website.