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Opportunity to study abroad
including Australia, Canada and the USA

The University of Nottingham has been recognised as delivering a Gold standard in the Teaching Excellence Framework (TEF), which aims to recognise and reward excellent learning and teaching

Industry placements
with international companies such as GlaxoSmithKline, Pfizer, and Johnson & Johnson

Specialist laboratories for biochemistry and molecular sciences

£5m purpose built teaching laboratory

International Arabidopsis Stock Centre
housing over half a million genetic plant stocks

Flexible modules to tailor to your area of specialism

Plant and animal tissue culture units
– facilities for gene cloning, sequencing and the generation and evaluation of transgenic plants

95% of undergraduates had secured work or further study within six months of graduation*

* Known destinations of full-time home undergraduates who were available for work, 2016/17. Salaries are calculated based on the median of those in full-time paid employment within the UK.
We deliver exciting, career focused degree courses led by an inspiring and dynamic teaching team. You will access teaching delivered by some of the brightest minds in their fields, shaped by the latest ground-breaking research. Our wide range of undergraduate and postgraduate courses explore topical and commercial issues in biosciences such as global food security, sustainable agriculture and the environment and its protection.

You will primarily study at Sutton Bonington Campus which combines specialist facilities for studying biosciences and veterinary medicine with pioneering research and inspiring academics. The dedicated Students’ Union, campus based societies, sports and events create a unique student experience.

Study abroad opportunities
Being part of a global university, the school offers a wide variety of study abroad opportunities. Depending on your course, you can:

- apply to spend part or all of your second year at the University of Nottingham Malaysia Campus
- apply to spend a semester at one of our international partner universities, including Australia and Canada
- or take part in a summer school or field course abroad

Whatever your ambitions, our aim is to help you achieve them here at Nottingham.

Why study with us?

Our courses

<table>
<thead>
<tr>
<th>Degree title</th>
<th>UCAS code</th>
<th>Duration</th>
<th>A levels</th>
<th>IB</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single honours</td>
<td></td>
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</tr>
<tr>
<td>BSc Biotechnology</td>
<td>J700</td>
<td>3 years</td>
<td>ABB-BBB*</td>
<td>32-30</td>
</tr>
<tr>
<td>MSci Biotechnology</td>
<td>J703</td>
<td>4 years</td>
<td>ABB-BBB*</td>
<td>32-30</td>
</tr>
<tr>
<td>BSc Microbiology</td>
<td>C501</td>
<td>3 years</td>
<td>AAB-ABB**</td>
<td>34-32</td>
</tr>
<tr>
<td>BSc Plant Science</td>
<td>C200</td>
<td>3 years</td>
<td>AAB-ABB*</td>
<td>34-32</td>
</tr>
<tr>
<td>MSci Plant Science</td>
<td>C203</td>
<td>4 years</td>
<td>AAB-ABB*</td>
<td>34-32</td>
</tr>
</tbody>
</table>

* Including two science-based subjects (biology required; geography and psychology accepted) excluding critical thinking and general/citizenship/leisure studies; ABC may also be considered depending on predicted grades in specific subjects. A pass is required in science practical tests, if assessed separately.

** Including two science based subjects (biology and chemistry preferred), excluding critical thinking and general/citizenship/leisure studies. A pass is required in science practical tests, if assessed separately.

What's an MSci?
MSci degrees are undergraduate-level courses which last for four years and have an integrated masters qualification. They are the equivalent to a bachelor’s degree plus a masters level qualification. These courses usually provide additional industry and/or research experience to enhance your future prospects. An MSci is excellent preparation for further study such as a PhD.

If you choose to study an MSci, your student loan will cover tuition fees and living costs for the additional year too (home/EU students only). If you are unsure on whether to choose an MSci or BSc, we recommend you choose the MSci to secure your funding. Transfer to the BSc is possible.

Foundation courses
Applicants who are not eligible for direct entry to undergraduate study may be able to apply for a foundation course. Find out more at nottingham.ac.uk/foundationcourses

English language requirements
IELTS 6.0 (no less than 5.5 in any element). For details of other English language tests and qualifications we accept, please see nottingham.ac.uk/go/alternativerequirements

Academic English preparation
If you require additional support to take your language skills to the required level, you may be able to attend a presessional course at the Centre for English Language Education, which is accredited by the British Council for the teaching of English in the UK.

Students who successfully complete the presessional course to the required level can progress onto their chosen degree course without retaking IELTS or equivalent. Find out more at nottingham.ac.uk/cele

nottingham.ac.uk/ugstudy/biosciences
BSc | MSci Biotechnology

Nottingham’s international reputation for research excellence means that you will be taught at the cutting edge of biotechnology, accessing the latest tools and technologies, with options to specialise in your area of interest.

Biotechnology is a revolutionary science which involves the exploitation of biological processes, organisms and cellular components to develop innovative products. It impacts on health, medicine, food and the environment.

You will be introduced to the latest molecular techniques useful in manipulating biological systems while you learn the fundamental aspects of physiology, biochemistry and genetics of a cell. This course gives you the option to study pathways in plant, animal or microbial biotechnology.

Key topics include genetically modified crops, industrially significant micro-organisms and sustainable development.

Year one
You will study a broad base of core modules in biochemistry, genetics and cell biology, animal biology and microbial physiology to gain an understanding of the biochemical processes in living organisms.

Year two
You will have a wide choice of optional modules, allowing you to specialise in the areas which most interest you.

Year three
Your research project is a very important component of year three and may involve molecular studies on animals, plants or microorganisms. You’ll work in close collaboration with research-active scientists on problems of real significance, making use of the considerable research expertise and facilities available on campus. Examples of recent projects include:
- biopharmaceuticals and natural product drug discovery
- generation of recombinant calpastatin to study effects on muscle growth associated with various forms of cancer
- optimising the production of green sugars from municipal solid waste

Year four (MSci only)
The MSci year enables you to undertake a substantial research project; advancing your skills in research, advanced molecular methods techniques, analysis, project management and communications.

Modules may change, for example due to curriculum developments. The above list is a sample of typical modules that we offer, not a definitive list. The most up-to-date information can be found on our website at nottingham.ac.uk/ugstudy/biosciences

nottingham.ac.uk/ugstudy/biosciences
BSc Microbiology

Microbiologists are at the cutting edge of solving the microbial problems facing mankind.

At Nottingham, you will learn a wide variety of practical techniques, develop research knowledge and gain industry exposure. By the end of the course you will be qualified to work with microbial pathogens – this means you can pursue a laboratory career immediately, such as in a research lab or pharmaceutical company.

Microbiology is a laboratory-based science studying the microorganisms which affect human, animal and plant health. Microbiologists work in a huge variety of fields, including food, healthcare, chemicals and waste treatment. For example, genetically modified microbes are used to combat pests and disease in crops without the need for chemical sprays. Valuable products like insulin for diabetes and vaccines against diseases are made cheaply and efficiently by modified microbes.

Year one
You will be given perspective on how microbes interact with humans, animals, plants and other organisms; how they influence environmental processes, and how microbial products contribute to healthcare, food production, and manufacturing.

Year two
Core modules include a significant proportion of laboratory-based work. Through practicals you will learn a number of methods needed for the safe handling, culture, isolation, enumeration and identification of a range of ACDP2 pathogens. Alongside your scientific development you will consolidate your professional competencies and abilities as a microbiologist.

Year three
You will undertake a year-long research project, spending at least three full days per week in the final semester undertaking your work. Examples of recent projects include:
- testing clinical or food samples to detect specific mycobacterial pathogens
- metal and antibiotic resistance in enterobacteria
- novel bioluminescence-based assay for sortase inhibitors

You will also be able to choose from a wide range of optional modules to focus on your area of interest.

 Modules may change, for example due to curriculum developments. The above list is a sample of typical modules that we offer, not a definitive list. The most up-to-date information can be found on our website at nottingham.ac.uk/ugstudy/biosciences

Our courses

On this course you can study abroad and/or do an industry placement

From a young age I have always been interested in science and the microbial world, studying Microbiology at Nottingham has nurtured this and allowed me to grow as a scientist. When I was applying to university I found this course to be the best of all my choices, this was soon confirmed when I started my degree. The teaching staff here are amazing, going to great lengths to help you and offer invaluable advice.

Lucy Allen,
BSc Microbiology

nottingham.ac.uk/ugstudy/biosciences
BSc | MSci Plant Science

At the University of Nottingham we have an international reputation for the quality of our plant science research. You will be taught by experts in different aspects of plant science enabling you to pursue a career in your area of interest.

All the food we eat is ultimately derived from plants. As the population grows and our climate becomes less predictable, we need to improve crop productivity. Scientists with a detailed knowledge of plant science are in high demand.

Our plant science course explores, through investigation and experimentation, how plants grow, develop, reproduce, evolve, fight off pests and diseases, and interact with and respond to their environment.

You will learn many exciting aspects of modern plant science, including cell and molecular biology, genetic engineering, plant-pathogen interactions, environmental physiology, and ecology. Throughout the course, there is a focus on the application of plant science in the agricultural, horticultural, biotechnology and food industries.

Year one
You’ll be introduced to the conventional uses of plants and describe some of the problems associated with plant production including biotic and abiotic stresses. You’ll then discuss the techniques used to study plant science, including genetics and the use of mutants before being familiarised to the applications of biotechnology in plant science.

Year two
As you progress through the second year, you will develop and consolidate your professional competencies and abilities as a bioscientist. In Applied Plant Physiology you’ll cover major crop species in the UK and worldwide and examine the physiological basis of resource capture and utilisation in crop growth and development. You can choose between pathways in Soil Science or Molecular Biology.

Year three
You will undertake a research project in plant science which may be either laboratory, field-based or data driven. The research project encourages critical thinking and involves independent study and teamwork, a literature survey, and data handling, analysis and interpretation. Examples of recent projects include:
- use of PCR to monitor transposons in petunia
- photosynthesis acclimation in Arabidopsis ecotypes
- use of a fern for the phytoremediation of soil contaminated with arsenic

Year four (MSci only)
You will embark on a sizeable level of research activity that is far more independent than your project in year three.

To underpin this you will continue to study a number of modules linked to your research work covering how to write research proposals, statistics, project management and public engagement and communication skills.

This additional year enables you to graduate with an integrated masters level qualification and is an ideal opportunity to develop a broad range of the skills needed in the co-ordination of research and projects.

nottingham.ac.uk/ugstudy/biosciences

Typical modules

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<tr>
<th>Year one</th>
<th>Year two</th>
<th>Year three</th>
<th>Year four (MSci only)</th>
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<tbody>
<tr>
<td>Core</td>
<td>Core</td>
<td>Core</td>
<td>Core</td>
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<tr>
<td>Plant Science</td>
<td>Applied Plant Physiology: From Cell to Crop</td>
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<tr>
<td>Plant Science Research Tutorials</td>
<td>Professional Skills for Bioscientists</td>
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<tr>
<td>Biochemistry – The Building Blocks of Life</td>
<td>Research Techniques for Bioscientists</td>
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<tr>
<td>Biosciences Tutorials and Foundation Science</td>
<td>Optional</td>
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<tr>
<td>The Biosciences and Global Food Security</td>
<td>Enterprise Management Challenge</td>
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<tr>
<td>Genes and Cells</td>
<td>Forest Ecology and Management</td>
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<tr>
<td>Grassland Management</td>
<td>Fieldwork skills – sampling and surveying techniques</td>
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<tr>
<td>The Ecology of Natural and Managed Ecosystems</td>
<td>Plant Pests and Diseases</td>
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<tr>
<td>Applied Genetics</td>
<td>Soil Science</td>
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<td></td>
<td>Biological Photography and Imaging One</td>
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<td></td>
<td>Computer Modelling in Science: Introduction</td>
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<td>Economic Analysis for Agricultural and Environmental Sciences</td>
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<td></td>
<td>Ecosystem Processes</td>
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<td></td>
<td>Molecular Biology and the Dynamic Cell</td>
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<td></td>
<td>Molecular Pharming and Biotechnology</td>
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</table>

On this course you can combine with a year in computer science, go on an industry placement and/or study abroad.

Modules may change, for example due to curriculum developments. The above list is a sample of typical modules that we offer, not a definitive list. The most up-to-date information can be found on our website at nottingham.ac.uk/ugstudy/biosciences.
Biotechnology, microbiology and plant science are global subjects, and studying at our Malaysia Campus or one of our highly ranked university partners abroad will give you the unique opportunity to see your degree from a different perspective.

Studying abroad takes you out of your comfort zone; it helps you to develop valuable skills, such as independence and resilience, which are attractive to future employers.

University-wide exchange programme
This prestigious programme gives you the opportunity to apply to study abroad for the first semester of year two (subject to progression criteria). Successful candidates will study at one of our highly-ranked partner universities in a variety of locations, including Australia, Canada New Zealand, and the USA, depending on your subject.

Finance
Studying abroad may not be any more expensive than studying in Nottingham. The University offers a number of bursaries and scholarships to students studying abroad depending on your destination.

All students who participate in one of the University’s exchange programmes pay a reduced tuition fee to the University of Nottingham UK during the academic year when they study abroad. No tuition fees are paid to the host university or overseas campus.

On my course, I’ve had the chance to travel and study in Malaysia, immersing myself in the rich culture of the University’s Malaysia Campus, tapping into the unique knowledge base of cutting-edge crop research. As an aspiring plant scientist, the idea of studying among world-renowned scientists, while living surrounded by tropical rainforest, has long been my dream. I’ve now had the chance to make it reality.

James Pickering, BSc Plant Science

nottingham.ac.uk/biosciences

nottingham.ac.uk/biosciences/studyabroad
Achieve your potential

A placement year enables you to develop a range of skills and enhance your employment prospects, while, in the majority of cases, being paid a salary.

During the year in industry you can put your learning into practice, giving you a better understanding of your studies and the chance to solidify your knowledge in an industry setting. Past students have found the experience rewarding, as they were able to use science and innovation to solve problems which are current and relevant.

The year’s work experience, which can be in the UK or abroad, will significantly improve your employment prospects. Some students even secure a graduate job as a direct result of their placement year.

You can gain experience of how to communicate with people from a range of backgrounds, work to tight deadlines, manage multiple projects and deal with conflicting priorities. It’s a unique opportunity for you to learn about what you enjoy doing, your strengths and weaknesses, and the kind of environment you like working in, which will put you in a strong position when considering your future career.

The school has excellent links with a wide range of businesses and research institutes. The dedicated School Placement Team works with you in partnership to help you search, apply for and secure a placement, as well as supporting you throughout your placement. Some examples of relevant companies include: GlaxoSmithKline, Kew Gardens; the John Innes Centre; Pfizer; Hutchinsons; Medimmune and Johnson & Johnson.

During my placement with LGC I have worked to develop, validate and run new bioanalytical methods to analyse human samples from clinical trials. This is used by pharmaceutical companies to decide what an appropriate dose for their new drug might be, and whether the drug generates an immune response in humans, which may indicate it is not safe. I have developed a solid practical understanding of analytical techniques and work in a regulated environment. I now have plenty of technical knowledge to demonstrate in interviews and I’ve earned some money so that I can concentrate on my studies in the final year.

Matt Pratley, BSc Biotechnology

nottingham.ac.uk/biosciences/placements
Your world for the taking

95% of undergraduates in the school who were available for employment had secured work or further study within six months of graduation.*

Recent graduate destinations:
Biotechnology
- Medical laboratory science
- Computer science
- Pharmaceutical and food industries

Microbiology
- Microbiological research
- Healthcare and medicine research and development
- Scientific writing and communication
- Pharmaceutical and food industries
- Agricultural and environmental disciplines
- Advisory and management roles in agencies e.g. Defra, Food Standards Agency

Plant Science
- Plant propagators and tissue culturists
- Horticulturists
- Plant quarantine and quality inspectors
- Plant breeders
- Advisor for Natural England
- PhD studentships at institutions across the world

£22,000 was the average starting salary.*

Amplify your potential
Whether you already have a plan or need some inspiration, your Careers and Employability Service is here to help.

Academic excellence and employability go hand in hand at Nottingham. Your course, and the diverse student experiences we offer, will enable you to develop the skills and professional competencies required to thrive in the job market of the future.

We will help you explore your options, so you feel confident making choices about what you want to achieve. Our team will support you as you build your CV, search for jobs, prepare applications, practise your interview technique, and much more.

Get the Advantage
The career-enhancing Nottingham Advantage Award recognises and rewards your extracurricular activities. With a choice of over 200 modules, you can hone the key skills employers are looking for. From developing your leadership skills and learning a language to public speaking and volunteering, you will leave university with demonstrable experience that sets you apart from other graduates. For further information, visit nottingham.ac.uk/careers/advantage

Further study opportunities
Many of our graduates choose to continue their studies and undertake further research to MSc, MRes, MPhil or PhD level at the University of Nottingham or elsewhere. Opportunities for further study within the school include taught postgraduate courses in a wide range of specialist subject areas.

* Known destinations of full-time home undergraduates who were available for work 2016/17. Salaries are calculated based on the median of those in full-time paid employment within the UK.
How to apply

All applications for full-time undergraduate study at Nottingham, including applications by international students, must be made through UCAS.

You can apply online at ucas.com and will be notified of decisions through UCAS Track.

Your personal statement
This is the section of your UCAS form that tells us most about you, and you should make the best use of it. Be as specific and detailed as you can – we would like to see that you are a student who can work hard, be self-motivated and make the best possible use of the opportunities that our courses offer you. We would also like to hear about any skills you have gained through extracurricular activities.

Minimum entry requirements
Unless otherwise stated in individual course profiles, all UK applicants should have GCSE English grade 4 (C) as a minimum.

Alternative qualifications
In this brochure you will find our A level and International Baccalaureate entry requirements but we accept a much broader range of qualifications. For more details, visit nottingham.ac.uk/ugstudy/applying

Flexible admissions policy
In recognition of our applicants’ varied experience and educational pathways, we employ a flexible admissions policy. If we judge that your situation has adversely affected your achievement, then we will consider this when assessing your academic potential. Some courses may make a slightly lower offer. For more information about this policy, see nottingham.ac.uk/ugstudy/applying

Mature applicants
We encourage applications from mature students, who are defined as 21 years old and over. You should apply through UCAS. Find out more at nottingham.ac.uk/mature

International applicants
The University provides a range of information and advice for international applicants. If you are unable to attend an open day, we can meet you in your country at one of our overseas events or arrange an individual visit to the University. For further information please visit nottingham.ac.uk/international

Deferred entry
Applicants who wish to defer their entry by a year will not be at a disadvantage. Please tell us something about your plans for your gap year in your UCAS personal statement.

Equal opportunities policy
The University aims to create the conditions whereby students and staff are treated solely on the basis of their merits, abilities and potential, regardless of gender, race, colour, nationality, ethnic or national origin, age, socio-economic background, disability, religious or political beliefs, trade union membership, family circumstances, sexual orientation or other irrelevant distinction.

If you wish to declare a disability, please ensure that you have ticked the appropriate box on your UCAS application form. Disclosure of this information will not affect your application.
For undergraduate enquiries contact:
Student Recruitment Support Hub

+44 (0)115 951 5559
nottingham.ac.uk/contact
UoNBiosciences
@UoNBiosciences @UoNScience

nottingham.ac.uk/biosciences

This publication is available in alternative formats:
+44 (0)115 951 5559

This brochure has been drafted in advance of the academic year to which it applies. Every effort has been made to ensure that the information contained in this brochure is accurate at the time of publishing, but changes (for example to course content) are likely to occur given the interval between publication and commencement of the course. It is therefore very important to check our website for any updates before you apply for the course by following nottingham.ac.uk/ugstudy. Where there is a difference between the contents of this brochure and our website, the contents of the website take precedence.