Biochemistry is the study of the molecular basis of life and our Biochemistry BSc course will introduce you to all areas of modern biochemistry. You will gain the practical knowledge and skills needed to work in a scientific research environment, as well as transferable skills to begin a career in a variety of fields both in science and beyond. The course also features options to study abroad, undertake work placement or extend to a four-year MSci.

**Key benefits**
- Europe’s largest centre for medical and professional healthcare education.
- 96 per cent student satisfaction (National Student Survey 2016).
- Teaching by internationally renowned scientists and researchers.
- One of the UK’s best graduate employment rates.
- Contemporary approach based on our history of pioneering discoveries – including our part in identifying the structure of DNA.
- Flexible options to tailor your degree through overseas study, work placement or to switch to a four-year MSci.

**Course details**
On our Biochemistry BSc course you will study all areas of modern biochemistry including: biological chemistry, structural biology and biophysics, metabolism, cell biology, molecular genetics, bioinformatics, immunology and microbiology. This is a subject in which practical skills and the capacity to experiment are vital, so, alongside theoretical learning, you will also be trained in laboratory techniques, experimental design, data analysis and presentation.

This course forms part of the suite of ‘Common Year 1’ courses within the School of Bioscience Education. These comprise Anatomy, Developmental & Human Biology; Biochemistry; Biomedical Science; Medical Physiology; Molecular Genetics, Neuroscience; Pharmacology; Pharmacology & Molecular Genetics. Once you have successfully completed year one, you can choose to switch to any other course within this suite.

In your second and third years you will focus on applications of biochemistry for understanding human disease, the biochemical and biophysical techniques used in understanding biological processes and the relationship between protein structure and function.

In Year 2 you may also choose to study abroad at one of our partner institutions, or you can apply to undertake an extra-mural or work placement, usually at a leading biomedicine employer.

In your third year there is an opportunity to specialise further and to pursue laboratory and/or library-based projects in areas of current biomedical research. Alternatively, you can apply to transfer to our four-year Biochemistry MSci course or the four-year Integrated Pharmacology & Physiology for Research MSci.
Teaching
Teaching on this course takes place in lectures, seminars and tutorials and through practical laboratory work. The rest of your time will be spent on self-study, including reading, research and writing assignments.

Course stage | Percentage of time in scheduled learning and teaching activities | Percentage of time in guided independent study | Percentage of time on placements
---|---|---|---
Year 1 | 25% | 75% | -
Year 2 | 28% | 72% | -
Year 3 | 42% | 58% | -

Typically, one credit equates to 10 hours of work.

Assessment
You will be assessed through a combination of coursework, examinations and practical observation.

Course stage | Percentage of assessment by written exams | Percentage of assessment by practical exams | Percentage of assessment by coursework
---|---|---|---
Year 1 | 78% | 5% | 17%
Year 2 | 66% | 4% | 30%
Year 3 | 45% | - | 55%

If you choose an extra-mural placement this will be assessed through a written dissertation and a poster presentation which will be deemed equivalent to 60 credits at Level 6 (the normal level of Year 3 study).

Course accreditation
In recognition of its focus on research and academic excellence, our Biochemistry with extra-mural year BSc has been given Advanced Degree Accreditation by the Royal Society of Biology. Graduates of an accredited course can apply for membership of the Royal Society of Biology at Member (MRSB) level after just one year of practice, rather than the usual three years. This will allow you to attain the qualifications of Chartered Biologist or Chartered Scientist two years earlier than graduates of other degree courses.

Regulating body
King’s College London is regulated by the Higher Education Funding Council for England.

Course structure
Courses are divided into modules. You will normally take modules totalling 360 credits.

There are options to switch to any other course in the Bioscience suite or to a four-year MSci after Year 1. You can also choose to study abroad during Year 2.

Year 1
Required modules
You are required to take:
- Biochemistry (15 credits)
- Chemistry for the Biosciences (15 credits)
- Genetics & Molecular Biology (15 credits)
- Cell Biology & Neuroscience (15 credits)
- Fundamentals of Physiology and Anatomy (30 credits)
- Fundamentals of Pharmacology (15 credits)
- Skills for the Biosciences (15 credits)

Year 2
Required modules
You are required to take:
- Gene Cloning & Expression A (15 credits)
- Gene Cloning & Expression B (15 credits)
- Metabolism (15 credits)
- Protein Structure & Function (15 credits)
- Cell Biology A (15 credits)

Optional modules
In addition, you are required to take 45 credits from a range of optional modules, which may typically include:
- Experimental Biochemistry (15 credits)
- Human & Molecular Genetics (15 or 30 credits)
- Principles of Bioinformatics (15 credits)
- Cell Biology B (15 credits)
- Immune System in Health & Disease (15 credits)
- Medical Microbiology (15 credits)
- Tissue Pathology (15 credits)
- Neuroscience (30 credits)
- Essentials of Embryology (15 credits)
- Endocrinology & Reproduction (15 credits)
- Psychology (15 credits)
- Drug Discovery & Development (15 credits)
- Social Impact of the Biosciences (15 credits)
- A modern language (15 credits)

You will also have the opportunity to study abroad for your second year at one of our partner universities, which currently include:
- The University of Melbourne, Australia
- National University of Singapore
- The University of California
- The University of North Carolina - Chapel Hill

You may be required to fulfil additional entry requirements for this option.

Also, you may apply for an extra-mural year, to be taken between the second and third years if selected. Students apply directly to placement providers through a process facilitated by the university. Placements, either in the UK or overseas, may be in a pharmaceutical company, a government research establishment or academic research institute. Courses incorporating the extra-mural year are accredited by the Royal Society of Biology. Placement companies and establishments in the past have included:
- CIB (Centro de Investigaciones Biologicas), Madrid
- Eli Lilly & Company Ltd
- GlaxoSmithKline Co. Durham/Stevenage/ Uxbridge
- Huntingdon Life Sciences Limited
- Imanova Ltd, Imperial College
- Life Science Institute, National University of Singapore
- Medical Research Council Technology
- MRC National Institute for Medical Research
- Novartis Switzerland/UK/USA
- NUS Singapore
- OSI Prosidion Limited
- Pfizer
- Pneumolabs UK Limited, Stevenage
- St George’s, University of London
You are required to take:

- Protein Structure & Design (15 credits)

You are also required to conduct one of the following research projects:

- Molecular Biology Practical Project (30 credits) and a Library project (15 credits)
- Extended Research Project (45 credits)

Optional modules

In addition, you are required to take 60 credits from a range of optional modules, which may typically include:

- Molecular Basis of Human Disease (15 credits)
- Advanced Biophysical Techniques (15 credits)
- Oxidative Stress in Experimental Pathology (15 or 30 credits)
- Biomedical Diagnostics (15 credits)
- Molecular Immunology (15 credits)
- Advanced Molecular Genetics (15 credits)
- Molecular Genetics of Model Organisms (15 credits)
- Medical Genetics (15 credits)
- Epigenetics (15 credits)
- Biology of Cancer (30 credits)
- Cell Physiology (15 credits)
- Endocrinology of Diabetes (15 credits)
- Muscle (15 credits)
- Mechanisms of Development (30 credits)
- Drug Safety & Toxicology (30 credits)
- Viruses & Diseases (15 or 30 credits)
- Modules from across the School of Bioscience Education
- A maximum of one modern language module (15 credits)

During Year 3 you can apply to transfer to the four-year MSci Integrated Pharmacology and Physiology for Research, on which you will be required to take a 90-credit research project usually at an external industrial provider within the UK during your fourth year.

A contribution by the university is given to cover additional living costs during the project up to a maximum of £2,000.

King’s College London reviews the modules offered on a regular basis to provide up-to-date, innovative and relevant programmes of study. Therefore, modules offered may change. We suggest you keep an eye on the course finder on our website for updates.

Location

This course in primarily taught at the King’s College London Guy’s and Waterloo Campuses, both on the South Bank of the Thames, putting you at the heart of everything London has to offer in terms of academic resources and also close to its social and entertainment attractions.

Career prospects

Graduates from the School of Bioscience Education are equipped with a variety of transferable skills including data gathering, analysis and interpretation, presentation skills and teamwork. Others have continued to study in medicine, dentistry and other related fields including pharmaceutical sciences, cardiovascular pharmacology and biomedical research.
Fees and funding

Full-time tuition fees – UK
The UK tuition fees for the 2018–19 academic year are available on the course web page.

Please note that the tuition fees for subsequent years of study may be subject to increases in line with King’s terms and conditions.

Full-time tuition fees – EU
Current regulations allow some students to pay UK tuition fees on the basis of their EU citizenship or residency. Until these eligibility criteria are changed, the EU tuition fee will remain the same as the UK tuition fee.

The UK tuition fees for the 2018–19 academic year are available on the course web page.

Please note that the tuition fees for subsequent years of study may be subject to increases in line with King’s terms and conditions.

Full-time tuition fees – International
The International tuition fees for the 2018–19 academic year are available on the course web page.

Please note that the tuition fees for subsequent years of study may be subject to increases in line with King’s terms and conditions.

All International applicants to undergraduate courses are required to pay a deposit of £2,000 against their first year’s tuition fee. This deposit is payable when you firmly accept an unconditional offer to study with us, and will be offset against your tuition fees when you join King’s.

For further information, please visit the fees and funding section of our website:
www.kcl.ac.uk/study/undergraduate/fees-and-funding/index.aspx

Additional costs
While students are on a study abroad or extra-mural year, King’s will continue to invoice students for a proportion of King’s tuition fees. At present these are as follows:

- Home students studying or working for a full academic year abroad will receive an invoice for £1,350 for King’s tuition fees for the year.
- International students studying or working for a full academic year abroad will receive an invoice for one third of the King’s tuition fees for the year.

You should also budget to pay for the associated subsistence costs, such as travel, visas, accommodation and food as well as any vaccination/immunisations required by the country to which you are travelling.

In addition to the costs above, you can also expect to pay for:

- books if you choose to buy your own copies
- college approved calculator for exams (Casio fx83 or fx85)
- clothing for optional course related events and competitions
- library fees and fines
- personal photocopies
- printing course handouts
- society membership fees
- stationery
- graduation costs
- travel costs for travel around London and between campuses.

Disclaimer
This PDF was produced in August 2017. Although it was up-to-date at the time it was produced, please make sure you check our website www.kcl.ac.uk/study or contact us directly for the very latest information before you commit yourself to any of our courses.

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