School of Biological and Chemical Sciences
Undergraduate Study 2020
Biological Sciences | Biomedical Sciences
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qmul.ac.uk/sbcs
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Welcome

Thank you for your interest in studying at Queen Mary University of London. Across all of our degrees, we offer a broad curriculum to equip you with a solid grounding in the scientific discipline of your choice, whether in the biological, biomedical or chemical sciences, or psychology.

Your time as a student is sure to be life-changing. Queen Mary is part of the prestigious Russell Group, and our graduates are highly prized by employers. You will be part of a thriving academic community and be taught by high-calibre staff who are leaders in their field.

But it’s not all about league tables with us. Not only do we offer a stimulating learning experience and research-led teaching, but we pride ourselves on being a friendly and inclusive university, and encourage our students to take advantage of the wealth of extra-curricular activities on offer at Queen Mary.

Our priority is for our students to make the most of their degree, to develop their future potential and to have the basis for employment in a range of sectors.

"Studying at a Russell Group university in London has already given me chances to help my future career. I feel very confident that my degree from Queen Mary will allow me to pursue whatever I wish to do".

Atalanta Hersey
Medical Genetics BSc

*Destination of Leavers in Higher Education survey, 2016/17, based on UK-domiciled, full-time students.
Why choose Queen Mary London?

One of the UK’s leading universities
• Member of the Russell Group – one of the UK’s 24 leading universities
• £25,000 – average salary of Queen Mary undergraduates six months after completing their course (Destination of Leavers from Higher Education survey, 2016/17)
• Teaching inspired by our world leading research
• Eight Nobel Prize winners among former staff and alumni
• 5th in the UK for our 3* and 4* research outputs (Research Excellence Framework 2014)
• Distinguished history dating back to 1123 (the foundation of St Bartholomew’s Hospital)

Generous support
• Generous package of bursaries and scholarships
• 269 of our students received a scholarship in 2018/19

We are international
• Part of the internationally recognised University of London (UoL)
• Students and staff from over 162 countries
• Links with leading international universities, and opportunities to study abroad on many programmes
• One of the most internationally diverse university in the world (Times Higher Education, 2017)

Exceptional facilities
• £105m spent on new facilities over the past five years
• Some of the largest open-plan laboratories in Europe in the Blizard Building
• 7,700 metres of new learning space with the new £5.2m Chemistry undergraduate teaching lab opened in 2018 and £39m Graduate Centre which opened in 2017

A friendly community in a great location
• Only university in London able to offer an attractive residential campus at our home in Mile End
• Short walk from the creative, technical and social hubs of Brick Lane and Shoreditch, and close to London’s financial centres, the City and Canary Wharf
• Set beside Regent’s Canal in Mile End, our main campus is one stop on the Tube from Stratford’s Queen Elizabeth Olympic Park, and minutes from the West End

From our location in the heart of east London – one of the capital’s most dynamic areas – to our welcoming campus, world-leading research and inspiring teaching, there are many reasons to make Queen Mary your first choice.
Highlights

- A wide range of extra-curricular activities provides opportunities for engagement outside the classroom
- A well-developed advisory and student support system
- Vibrant research culture and inspirational teaching
- A dedicated Careers Consultant along with subject-specific events and support
- A dedicated Internships Coordinator
- Accreditation for our Chemistry, Pharmaceutical Chemistry and Psychology programmes
- A varied programme of lectures and guest speakers
- Strong research and teaching links with institutions such as the Natural History Museum and Kew Gardens, as well as industry partners, including GlaxoSmithKline and the Environment Agency
- Access to exceptional facilities, including recently refurbished laboratories and the latest research technology
Becky Oldroyd - BSc Psychology (graduated 2018)

Now PhD student at Queen Mary

Studying as an undergraduate student at Queen Mary was one of the greatest experiences of my life – so much so that I decided to stay here to complete my PhD. As an undergraduate, I studied BSc Psychology. The course at Queen Mary was unlike any other top university course, as it had a strong biological and statistical component, which prepared me for transferring straight from an undergraduate to a PhD programme. As an undergraduate, there were multiple opportunities to volunteer and get involved outside of your course, from things such as being a wellbeing mentor to A Level students, to being a research assistant working alongside PhD students. It was due to the wealth of opportunities and the world-class education that I left Queen Mary as a more confident and well-rounded version of myself. For that, I will always be grateful and proud to be a Queen Mary alumni.

Lilian Goodchild - BSc Biomedical Sciences (graduated 2018)

Now Genetic Technologist in Molecular Genetics at St George’s University Hospitals NHS Foundation Trust

I obtained my BSc in Biomedical Sciences from Queen Mary in 2018. Studying a degree that so broadly covers the fundamental aspects of both molecular and cellular biology, pharmacology, physiology, anatomy, genetics and genomics has been so beneficial and has opened doors in such an array of scientific disciplines. For my final year thesis, I was lucky enough to put my passion for cancer biology into practice and undertake a research project at Barts Cancer Institute where I investigated the mechanisms driving chromosomal instability in pancreatic cancer. After I graduated with First Class Honours, I moved straight into a cancer research internship within the Centre for Cancer Prevention at the Wolfson Institute of Preventive Medicine, where for the next 6 months I worked on a project aiming to work towards an in-depth characterisation of the pathways leading from gene methylation to specific programmes of cell differentiation. These experiences led me to my current position as Genetic Technologist in Molecular Genetics at St George’s. My time at Queen Mary really fuelled and strengthened my ambitions to pursue a career within cancer biology and genetics, and I am incredibly proud to be a Queen Mary alumni.
Our Alumni

**Indigo Dean – BSc Chemistry (graduated 2015)**

Now Application Laboratory Technician - Cosmetics at RAHN-UK

Since studying Chemistry at Queen Mary, the door has opened to so many opportunities and industries. After completing my Bachelors degree in 2015, I obtained a position within the SBCS Teaching Laboratories as a Chemistry Teaching Technician. It gave me such a great insight into how the undergraduate practicals are prepared and I was able to help and give first-hand advice to the students as I completed the same practicals when I was a student at Queen Mary. After two years, I moved onto Martindale Pharma, a pharmaceutical company specialising in bespoke medicines. I gained valuable experience of life in industry and a GMP environment but I felt that I suited a more creative field. This led me to my current position at RAHN UK, a cosmetic ingredient supplier and distributor. I work in the laboratory formulating new cosmetic concepts that contain specialised actives. I am able to think of new ideas and bring them to life within the lab. It has given me the opportunity to advance my scientific knowledge and build on the fundamental skills I developed at Queen Mary.

**Shahid Dharmsi – MSci Pharmaceutical Chemistry (graduated 2015)**

Now Senior Consultant at EY

In September 2011, I began a four-year journey that would end with a Masters degree in Pharmaceutical Chemistry. As a proud alumni of SBCS, I take myself back to the first day – walking through the East Gate and looking at the Joseph Priestly building. Over the coming semesters I found that confidence replaced my uncertainty in relation to carbon chains, bass in my voice replaced the indecision when it came to matter and anti-matter, but most importantly I felt that I belonged. Sometimes delving deep in to the depths of human understanding in areas of science, whilst other times arguing over the number of chiral centres in a chain for an assignment due later that day – I was motivated to discover my true self. I enjoyed physical chemistry, and with lectures and guidance from Dr Zarbakhsh, I got a First Class in my fourth-year thesis entitled: The Characterisation of Surface Biocompatibility. SBCS nurtured my strengths and boosted my confidence to such a level that I felt I could achieve anything.

**Chloe Sinclair – BSc Biology (graduated 2015)**

Now Business Analyst at UBS

I truly enjoyed my experience at Queen Mary’s School of Biological and Chemical Sciences and have been able to apply many of the skills that I developed during my degree to my new career in investment banking. These range from technical skills in statistical analysis, to softer skills such as communication and perhaps most importantly, critical thinking. There was a good balance between lectures, lab assessments and free study time, which I found to be essential in enabling me to enhance my CV with work experience and extracurricular activities. I’m proud to have studied at Queen Mary, which enjoys a strong reputation in the business world - I’ve also met many other alumni in my current role. I’d highly recommend SBCS to prospective students that their experience at the School will be applicable to many career options, not limited to STEM alone.

**Ibrahim Farah – BSc Medical Genetics (graduated 2015)**

Now Head of Translational Research and Discovery at Shivom

Studying Medical Genetics from leading experts and academics at such a respected institution has opened many doors for me in industry and the academic world. The course was strategically designed so that I would be able further progress in genetics either through a ‘wet lab’ or a ‘bioinformatics’ route and gave me an opportunity to study genetics from other areas including evolutionary and plant-based genetics, giving me a broad understanding of the field. The option to select modules empowered me to take control of my learning, and has since led me to further research into the field of neuroscience through my MSc and now in my current capacity at health-tech company Shivom. I have made lifelong friends from the course who are in the field
Our Alumni

as well and I keep in contact with them. My experience at Queen Mary shaped me into who I am today and undoubtedly SBCS will continue to shape and nurture the next generation of leading scientists.

Dr Emmanuel Gonzalez Escobar – Genetics (graduated 2013)
Now Plant Biochemist Research Associate at Lancaster University

I graduated from Queen Mary in 2013. The course structure of my Genetics degree allowed me to select modules ranging from ecology to chemistry, and I grew to appreciate the fundamentals of biological research. It was this freedom to choose from several modules that reignited my interest in biochemistry. Queen Mary wasn’t just a stepping stone to my research career, it set the foundation to where I am now, and I am very appreciative of the way we were pushed through challenges and the opportunities to carry out hands-on research during practicals. Each year I chose biochemistry-related modules, which culminated in doing a third-year project with Professor Conrad Mullineaux, studying the regulation of photosynthesis in tiny, single-cell cyanobacteria. The skills that I learned then, plus the opportunity to conduct independent research motivated me to pursue a PhD directly after graduating. I am now working to improve photosynthesis globally for food security and I’m also the Project Lead and Founder of a UK-led initiative called Seanasol that envisions better sustainable agricultural practices in harsh and remote environments.

Dr Sally Faulkner – Zoology (graduated 2012)
Now Lecturer in Conservation and Ecology at Queen Mary University of London

I came to Queen Mary to study a BSc in Zoology, as a mature student in 2009. I found Queen Mary and in particular SBCS to be warm and welcoming from my first day right through to my last. I felt there was an inspiring and engaging community feel among the department I was involved in. The many field trips meant that I could get to know my lecturers and technical staff well and I really got to understand how academic life works. I was lucky to be able collect data for my final year project in a remote rainforest in Indonesia and this, along with encouragement from my lecturers started my career as a conservation scientist. I passed with First Class Honours and moved straight to do an MRes in Primatology at University of Roehampton. I was then offered a place on the first cohort of the London NERC DTP programme. Despite seeing many other universities on this programme it was the experiences at Queen Mary that drew me back and I was able to pursue a PhD within SBCS, co-supervised by the Institute of Zoology. After my PhD I knew I wanted to pursue a career where I could inspire students the same way that I had been inspired when I was an undergraduate. I have since been offered a lectureship position within the department where my academic career first started. I try to take the lessons I learned as an undergraduate student to every lecture I give as an academic staff member and I am incredibly proud to be part of the past, present and future of Queen Mary.
Studying Biological and Biomedical Sciences, Chemical Sciences or Psychology

All our biomedical programmes are co-taught between the School of Biological and Chemical Sciences and Barts and The London School of Medicine and Dentistry in our Mile End, Whitechapel and Charterhouse Square campuses. Other programmes are mainly based in the School of Biological and Chemical Sciences in Mile End.

You can find more detailed information about each course on pages 26 - 69.

Study abroad
Queen Mary offers the opportunity to apply for degrees with an additional year abroad, allowing you to experience living in another country, learn about different cultures and broaden your horizons.

Find out more about study abroad opportunities at Queen Mary at: www.qmul.ac.uk/international/global-opportunities

Biological Sciences and Biomedical Sciences
Our programmes span the whole of the biological and biomedical sciences. For medically related subjects, consider our Biomedical Sciences, Medical Genetics, Neuroscience and Innovative Therapeutics programmes (co-taught between the School of Biological and Chemical Sciences and Barts and The London School of Medicine and Dentistry). Those interested in ecology or conservation might prefer Zoology, while if your interests lie at the molecular end of biology, Genetics or Biochemistry may be for you. Our Biology programme offers a strong grounding in biological sciences, with opportunities to specialise as your interests develop.

Chemical Sciences
The science of chemistry underpins all aspects of modern life – from human health and medicine to manufacturing. Many of our graduates are highly sought after by employers and attract good starting salaries. The Chemistry and Pharmaceutical Chemistry programmes at the School of Biological and Chemical Sciences are accredited by the Royal Society of Chemistry. These programmes and the Biochemistry programmes are taught in the Joseph Priestley building, which has recently benefitted from a £5.2 million investment into a new undergraduate teaching lab.

Psychology
Our approach to psychology is based on the simple observation that the brain, the seat of human and animal mind and behaviour, has evolved and therefore must reflect facets of biological processes. This emphasis on the biological and neuroscientific perspective is unique from many other psychology programmes, which are often based within social science departments. Our Psychology degree is accredited by the British Psychological Society. This means our graduates are eligible for Graduate Basis for Chartered Membership (GBC) – an entry requirement for the postgraduate and training programmes which lead to becoming a fully Chartered Psychologist.
Foundation programmes

Integrated Foundation degrees at Queen Mary provide students with alternative routes onto undergraduate degrees. While in your foundation year, you have access to all the University’s facilities and will be a full-time student.

Our BSc Biological and Chemical Sciences degrees with Foundation combine a foundation year with a traditional university degree into an integrated four-year programme (1+3). Successful completion of the foundation year and meeting the progression requirements guarantees you a place on a relevant degree programme without having to re-apply through UCAS.

The BSc Biological and Chemical Sciences degrees with Foundation are open to home, EU and international students. UK and EU foundation students are eligible to apply for funding through the Student Loans Company. Queen Mary offers tailored pathways for subjects across science and engineering. Visit the foundation website to see full details: sefp.qmul.ac.uk

Below are details of our biology and chemistry foundation programmes, including which degrees you can progress onto. You have to successfully complete the foundation year at the appropriate level to be eligible for degree progression.

**Biological Sciences (4 year).**
UCAS code: CCX1
Degree progression opportunities on the following programmes at Queen Mary:
- Biochemistry BSc
- Biology BSc
- Biomedical Sciences BSc
- Genetics BSc
- Medical Genetics BSc
- Neuroscience BSc
- Pharmacology and Innovative Therapeutics BSc
- Psychology BSc
- Zoology BSc

**Chemical Sciences (4 year).**
UCAS code: FFX1
Degree progression opportunities on the following programmes at Queen Mary:
- Chemistry BSc
- Pharmaceutical Chemistry BSc

**International Science and Engineering Foundation Programme**
We also offer an International Science and Engineering Programme (ISEFP), a one-year programme that offers pathways onto undergraduate degrees across science and engineering. The ISEFP is for international students only, whose highest level of study in their own country is not equivalent to A-level qualifications.

Visit the foundation website to learn more about the programmes: sefp.qmul.ac.uk

I found the foundation year really useful. Whilst we were studying similar subjects as A Levels, including Maths, Biology, Physics, Chemistry and English, the content was more complex so it was a really good starting point in terms of getting students used to what university is like and the independence that comes with it.”

**Annika Ramos**
Pharmaceutical Chemistry BSc and Vice President Education at Queen Mary’s Students’ Union
Careers

You will have excellent career prospects with a degree from Queen Mary. Our graduates progress into a range of sectors, including clinical and laboratory work, as well as postgraduate research and study and science communication.

Others transfer their skills into sectors such as marketing and finance. The latest data show that 92 per cent* of our graduates are in work or further study within six months of graduation.

Preparing you for the future
Queen Mary graduates are highly prized by employers, and your standing among graduate recruiters is also enhanced by our membership of the Russell Group of leading universities.

Our biological, chemical and biomedical programmes will give you practical lab experience, as well as advanced scientific understanding. Our biological programmes offer practical experience of fieldwork, which is a great advantage for those interested in conservation or research. **

All our programmes, including our Psychology BSc, will give you experience of experimental and sampling design, hypothesis generation and testing.

You will develop a range of transferable skills during your degree that will help you in whatever career pathway you choose, including communication, IT skills, presenting, reporting, team-work, research and analysis.

Careers information and guidance
The Careers and Enterprise team is dedicated to educating, advising and connecting Queen Mary students and recent graduates to employers. Their services expand your awareness of professional opportunities and teach invaluable job-searching skills that can be applied throughout your career and include: one-to-one appointments for CV checking and mock interviews; tailored workshops; employer-led events; and recruitment support for internships, part-time jobs and work placements.

You will have access to a dedicated Careers Consultant for your School who has expert knowledge of recruitment and connections to employers in their field.

*Source: Destination of Leavers from Higher Education Survey, 2016/17

**Fieldwork entails an additional cost. See page 72 for further details

£25,000* average starting salary

For my industrial placement year application at GlaxoSmithKline, I received a lot of support from the careers team, who helped me draft my cover letter and edit my CV to make it more suitable to the requirements of the role.*

Zahra Arjomand Nia
Pharmaceutical Chemistry with a Year in Industry BSc
Careers

Enterprise

Students and graduates across Queen Mary start new business and social ventures each year. Some make money, others make a positive social impact and many do both. In all cases, these projects help you to design your own work experience that demonstrates the enterprise skills sought by employers.

The Careers team provides support for students and recent graduates through funding, one-to-one advice at any stage of developing your business, workshops, workspace, access to experts and entrepreneurial networks.

Where do you see yourself?

Organisations employing our recent graduates include:

- Bloomberg
- Burgess Autistic Trust
- Civil Service
- Deutsche Bank
- EY (formerly Ernst & Young)
- Genomics England
- GlaxoSmithKline
- Government Office for Science
- Great Ormond Street Hospital
- Institute of Cancer Research
- KPMG
- Medical Research Council
- Merck Sharp and Dohme (MSD)
- National Hospital for Neurology and Neurosurgery
- NHS Blood and Transplant (NHSBT)
- NHS England
- NHS Trust
- PriceWaterHouseCoopers
- Princess Alexandra Hospital
- KPMG
- Medical Research Council
- Merck Sharp and Dohme (MSD)
- National Hospital for Neurology and Neurosurgery
- NHS Blood and Transplant (NHSBT)
- NHS England
- NHS Trust
- PriceWaterHouseCoopers
- Princess Alexandra Hospital

Graduate roles

Below is a representative sample of professional roles our recent graduates have gone on to:

- Analytical Chemist
- Assistant Psychologist (mental health)
- Business Analyst and Management Trainee
- Chemistry Researcher
- Chemistry Technician
- Clinical Biochemist
- Clinical Research Assistant
- Clinical Trials Officer
- Data Analyst
- Editorial Assistant (medical communications)
- Graduate Civil Service
- Graduate Funds Trainee
- Human Resources Executive
- Market Analyst
- Medical Laboratory Assistant
- Medical Laboratory Scientist
- Pharmacy Technician
- Psychological Counsellor
- Research Assistant
- Science Technician
- Synthetic Chemist
- Technology Consultant
- Trainee Clinical Research Consultant
- Trainee Biomedical Scientist

Many of our students also move onto postgraduate study, at either masters or PhD level, or gain entry to a graduate medical school programme.

92%* of our graduates are in work or further study within six months of graduation.

Destination of Leavers from Higher Education Survey, 2016/17
Course structure
Our courses are either three or four years full-time and each year is divided into two semesters. Our programmes involve a mixture of classroom activities and laboratory work. Most material is delivered via lectures, backed up with small-group tutorials and workshops.

A typical weekly workload would be:
• Eight one-hour lectures
• Nine to 12 hours of practical laboratories and workshops
• 18-20 hours of private study/coursework

Independent study
For every one hour of contact time, you are expected to do up to four hours on independent study, which could be spent preparing for, or following up on, formal study sessions, reading, assessing data from experiments, completing lab reports or revising for examinations.

The direction of your individual study will be guided by the formal study and laboratory sessions you attend, along with your reading and assignments. Independent study fosters the ability to identify your own learning needs and determine which areas you need to focus on in order to become proficient in your subject area. This is an important transferable skill and will help to prepare you for the transition to working life.

Assessment
All students must complete modules totalling 120 credits each year (normally eight modules). Each module is assessed through theory examinations (typically accounting for 70-90 per cent of the final mark) and coursework (e.g. practical reports, problem sheets, online exercises and tests).

Final year BSc students may undertake a research project worth 30 credits, while final year MSci students undertake a project worth 60 credits; these projects are generally assessed by a combination of detailed written report, a seminar presentation, a poster and an interview.

Examinations are taken each semester and may include multiple choice questions, short answer questions, problem-solving or essays.

All programme structures in this prospectus are indicative of what you will study, and are subject to availability. They may change from year to year as new topics are introduced and as we listen to student feedback.
Biochemistry
Our degree programmes

Biochemistry BSc (3 years)
UCAS code: C700
Biochemistry BSc with Year Abroad (4 years)
UCAS code: C70Y
Biochemistry MSci (4 years)
UCAS code: C701
Biochemistry MSci with Year Abroad (5 years)
UCAS code: C71Y
Biochemistry with a Year in Industry/Research BSc (4 years)
UCAS code: 3W45

Our Biochemistry programmes benefit from having world-leading researchers in both biology and chemistry together in one department. On all of these programmes, you will study the ways in which both disciplines interact in living organisms, and learn how this underpins our understanding of biological and medical science.

Our Biochemistry MSci includes a fourth year where you undertake an extended research project. You will work as part of a research group conducting original research work. Several of our students have published their work in peer review journals. As part of the Year in Industry/Research BSc, during your second year you will receive 1:1 support to help you to identify and apply for placement opportunities. If successful, you will spend your third year working in industry or carrying out an extended research project, before returning to Queen Mary for your fourth year.

All final year students on our BSc programmes or third year students on the MSci must complete one of the following:
• Biological sciences research project
• Project skills in the life sciences

For further details see: sbcs.qmul.ac.uk/undergraduate

Entry requirements:
A-level: BSc - ABB, including A-level chemistry
MSci, BSc year in industry/research - AAB, including A-level chemistry
IB: BSc - 34 points overall with 6,5,5 from three Higher Level subjects including chemistry
MSci, BSc year in industry/research - 35 points overall with 6,6,5 from three Higher Level subjects including chemistry

Fees: Home/EU: £9,250, International: £20,850* 2019/20 fees

Course highlights
• Wide array of second and third-year option modules
• Promotion opportunity to four-year MSci from the three-year BSc

Recent Employers
• Merck Sharp and Dohme
• Genomics England
• Barts Health NHS Trust
• The Exchange Lab
• GlaxoSmithKline*

Recent employment
• Clinical Biochemist
• Clinical Trials Practitioner (Oncology)
• Data Analyst

Recent graduates have gone to study
• Life Science PhD
• Algal Biofuel PhD
• Graduate Medicine MBBS

*Source: Last five years Queen Mary SBCS alumni database
There are lots of opportunities to get hands-on lab experience through both organised module based labs or independent research projects. Alyssa Miller, Biochemistry MSci
From human disease to ecology and evolution, this is the programme to choose if you want a broad-based degree covering the whole of the biological sciences. In your first year, you will cover subjects including genetics, evolution, physiology and biochemistry. In the second and final years, you can either retain this broad approach or specialise. Those interested in ecology, conservation or animal biology might take advantage of our wide range of field courses – for example, studying ecology in South Africa or hunting for dinosaur fossils in Canada – while others might prefer to opt for modules in neuroscience, developmental biology or the molecular basis of disease.

All third year students must complete one of the following:
- Biological sciences research project
- Project skills in the life sciences

For further details see: sbcs.qmul.ac.uk/undergraduate

For further details about fieldwork, including costs, go to page 72.

**Entry requirements:**
- **A-level:** ABB, including A-level biology
- **IB:** 34 points overall with 6,5,5 from three Higher Level subjects including biology
- **Fees:** Home/EU: £9,250, International: £20,850*  
  *2019/20 fees

**Course highlights**
- Wide array of second and third year option modules
- Hands-on experience from field trips**

**Recent Employers**
- NHS England
- The Centre for Reproductive Genetic Health
- National Hospital for Neurology and Neurosurgery
- GlaxoSmithKline
- Deloitte
- EY*

**Recent employment**
- Graduate Civil Service
- Embryology Associate
- Science Technician

**Recent graduates have gone to study**
- Ecology and Conservation MSc
- Public Health MSc
- Environmental Engineering MSc

*Source: Last five years Queen Mary SBCS alumni database
**Fieldwork entails an additional cost. See page 72 for further details
Biology

Modules

Year 1
• Practical molecular and cellular biology
• Cell biology
• Evolution
• Molecular genetics
• Practical biology
• Physiology
• Ecology (includes field trip to Somerset)
• Basic biochemistry
• Essential skills for biologists

Year 2
• Research methods and communication I

*Option modules
• Cell biology and developmental genetics
• Genes and bioinformatics
• Techniques for biological and chemical sciences
• Evolutionary genetics
• Animal and plant diversity
• Comparative and integrative physiology
• Marine and animal diversity (includes field trip to Millport, Scotland)
• Transmission genetics
• Metabolic pathways
• Microbial physiology and growth
• Membrane and cellular biochemistry
• Ecological interactions I and II (includes field trip to Croatia)

Year 3
• Research Methods and Communication II

*Option modules
• Behavioural ecology
• Membrane proteins
• Endocrine physiology and biochemistry
• Mammals and evolution
• Molecular basis of disease
• Population and chromosome genetics
• Functional genomics and epigenetics
• Neuroscience: from molecules to behaviour
• Parasites and infectious disease
• Reproductive and developmental biology
• Species: Dinosaurs to DNA (includes field trip to Canada)
• Savannah ecology and conservation (includes field trip to the African savannahs)
• Climate change and conservation challenges

*Optional modules currently available. All modules subject to change.

The overseas field trips are an amazing experience where you get to actively apply the biological concepts you learn, and they take you to a diverse range of places.”

Milahat Asif, Biology BSc
Biomedical Sciences
Our degree programmes

**Biomedical Sciences BSc**
UCAS code: B990

**Biomedical Sciences BSc with Year Abroad (4 years)**
UCAS code: B99Y

Biomedical science is concerned with understanding the causes, diagnosis and treatment of disease. Our programme is co-taught between the School of Biological and Chemical Sciences and Barts and The London School of Medicine and Dentistry. You will initially study subjects including human anatomy, physiology, biochemistry, molecular biology, immunology, genetics and pharmacology. In your final year, you will study specialist modules in topics including endocrinology, genomics, drug design, cell pathology and cancer biology. Many of our biomedical sciences graduates go on to study medicine and dentistry, and our programme has been designed with this in mind.

**All third year students must complete one of the following:**
- Biomedical sciences research project
- Project skills in the life sciences

**For further details see:** sbcs.qmul.ac.uk/undergraduate

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**Entry requirements:**

**A-level:** AAB, including A-level biology and one other science subject

**IB:** 35 points overall with 6,6,5 from three Higher Level subjects including biology and one other science subject

**Fees:** Home/EU: £9,250, International: £23,000* *2019/20 fees

**Course highlights**

- For those interested in studying medicine after graduation, the nineteen highest ranked students across Biomedical Sciences, Neuroscience and Pharmacology & Innovative Therapeutic degree programmes will be guaranteed an interview for the five year A100 Medicine MBBS degree (Barts and the London). Ranking, and consequent selection for interview will be based on an aggregate of academic ranking (50%) and UKCAT score (50%), and will be made at the end of the second year of study. The top five of these students will also be considered for the four year A101 MBBS Graduate Entry Programme.

**Recent Employers**
- Princess Alexandra Hospital
- Guy’s and St Thomas’ NHS Foundation Trust
- London Imaging Centre
- Oxford University Hospitals NHS Foundation Trust
- Great Ormond Street Hospital*

**Recent employment**
- Genetic Technologist
- Trainee Cardiac Clinical Scientist
- Biomedical Scientist
- Research Technician

**Recent graduates have gone to study**
- Medicine (Graduate Entry Programme) MBBS
- Dentistry BDS
- Clinical Neuroscience PhD

*Source: Last five years Queen Mary SBCS alumni database
## Biomedical Sciences

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<td>• Biomedical science case approach to problem solving</td>
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<td>• Tissue biology</td>
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<td>• Biomedical physiology I</td>
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*Option modules

- Clinical pharmacology
- Infectious diseases
- Advanced human genetic disorders
- Oral biology for biomedical sciences
- Endocrine physiology and biochemistry
- Advanced immunology
- Receptors and mechanisms of cell signalling
- Clinical trials and regulatory affairs
- Drug discovery and design
- Molecular basis of personalised medicine
- Cancer biology

*Optional modules currently available. All modules subject to change.*

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**Studying Biomedical Sciences was the perfect fit for me at the time, since it gave me the chance to deepen my knowledge of human biology and at the same time I found many chances to volunteer and gain work experience in hospitals.**

Carola Bigogno
Biomedical Sciences BSc (2018), currently studying Medicine at Barts and The London School of Medicine and Dentistry
Chemistry

Our degree programmes

Chemistry BSc (3 years)
UCAS code: F100

Chemistry BSc with Year Abroad (4 years)
UCAS code: F10Y

Chemistry MSci (4 years)
UCAS code: F103

Chemistry MSci with Year Abroad (5 years)
UCAS code: F13Y

Chemistry with a Year in Industry/Research BSc (4 years)
UCAS code: 9A32

Chemistry is often termed the central science as it connects mathematics, physics, biology and medicine. It is concerned with all aspects of the physical and chemical properties of matter, including the nature of atoms and molecules, their structure and composition, their reactions and the ways in which they can be used to produce useful products and materials. Chemistry at Queen Mary offers excellent and highly regarded training in both theoretical and practical chemistry, together with interdisciplinary modules such as spectroscopy, analytical chemistry and biochemistry.

Our Chemistry MSci includes a fourth year where you undertake an extended research project. You will work as part of a research group conducting original research work. Several of our students have published their work in peer review journals. As part of the Year in Industry/Research BSc, during your second year you will receive 1:1 support to help you to identify and apply for placement opportunities. If successful, you will spend your third year working in industry or carrying out an extended research project, before returning to Queen Mary for your fourth year.

All final year students on our BSc programmes or third year students on the MSci must complete one of the following:

• Chemistry research project
• Chemistry investigative project

For further details see: sbcs.qmul.ac.uk/undergraduate

Entry requirements:
A-level: BSc - ABB, including A-level chemistry
MSci, BSc year in industry/research
- AAB, including A-level chemistry
IB: BSc - 34 points overall with 6,5,5 from three Higher Level subjects including chemistry
MSci, BSc year in industry/research
- 35 points overall with 6,6,5 from three Higher Level subjects including chemistry

Fees: Home/EU: £9,250, International: £20,850* • 2019/20 fees

Course highlights
• Accredited by the Royal Society of Chemistry, which leads to Associate Member of the Royal Society of Chemistry status
• Promotion opportunity to four-year MSci from the three-year BSc

Recent Employers
• EY
• St George’s University Hospitals NHS Foundation Trust
• GlaxoSmithKline
• Hammersmith Medicines Research
• KPMG*

Recent employment
• Synthetic Chemist
• Chemistry Researcher
• Application Laboratory Technician
• Senior Chemist

Recent graduates have gone to study
• PhD in Chemistry
• PhD in Artificial Photosynthesis
• Energy MRes

*Source: Last five years Queen Mary BSCS alumni database
Year 1
• Essential skills for chemists
• Foundations of practical chemistry
• Fundamentals of organic chemistry I and II
• Fundamentals of inorganic chemistry
• Fundamentals of spectroscopy
• Fundamentals of physical chemistry
• States of matter and analytical chemistry

Year 2
• Practical chemistry
• Applied spectroscopy
• Structure and reactivity in organic chemistry I and II
• Physical and quantum chemistry I and II
• Solid state and inorganic chemistry I and II

*Option modules
• Engaging the public in science
• Introduction to scientific programming

Year 3
• Advanced practical chemistry
• Organic synthesis
• Topics in inorganic chemistry
• Topics in physical chemistry

*Option modules
• Bioorganic chemistry
• Advanced analytical chemistry and spectroscopy
• Computational chemistry
• Topics in biological chemistry

*Optional modules currently available. All modules subject to change.

Students taking the MSci will undertake a research project in their fourth year. For further details see: sbcs.qmul.ac.uk/undergraduate

My Chemistry degree helps me expand my knowledge not just in the Chemistry field but also explore the physical and mathematical side. It makes me push myself as an individual due to the diverse nature of the course itself.

Nishma Thakor,
Chemistry with a Year in Industry BSc
Genetics
Our degree programmes

**Genetics BSc (3 years)**
UCAS code: C400

**Genetics BSc with Year Abroad (4 years)**
UCAS code: C40Y

Modern genetics is revolutionising biology and medicine. The Government’s 100,000 Genomes Project aims to sequence the genomes of up to 100,000 NHS patients or infections in patients to produce better and earlier diagnosis of disease and more personalised care. None of this would be possible without a detailed understanding of genetics. Our programme covers a broad range of topics in modern genetics, with modules designed to give you a thorough grounding in the molecular biology of DNA, RNA and proteins, as well as the role of genes in development, ecology and evolution, equipping you with the skills needed to take your place at the forefront of 21st century science – whether it’s in biomedicine, conservation or ecology.

**All third year students must complete one of the following:**
• Biological sciences research project
• Project skills in the life sciences

**For further details see:** sbcs.qmul.ac.uk/undergraduate

For further details about fieldwork, including costs, go to page 72.

**Entry requirements:**
- **A-level:** ABB, including A-level biology
- **IB:** 34 points overall with 6,5,5 from three Higher Level subjects including biology

**Fees:**
- Home/EU: £9,250, International: £20,850* 2019/20 fees

**Course highlights**
• Wide array of second and third year option modules
• Hands-on experience from field trips*

**Recent Employers**
• Hammersmith Medicines Research
• Center for Life Sciences, National Laboratory Astana
• Cardiff and Vale University Health Board
• Corteva Agriscience*

**Recent graduates have gone to study**
• Immunology PhD
• Plant Science PhD
• Genomic Medicine PhD

**Recent employment**
• Laboratory Scientist
• Research Assistant
• Genetic Technologist

*Fieldwork entails an additional cost. See page 48 for further details

*Source: Last five years Queen Mary SBCS alumni database

**Fieldwork entails an additional cost. See page 72 for further details.**
Genetics

Modules

Year 1
• Practical molecular and cellular biology
• Cell biology
• Evolution
• Molecular genetics
• Practical biology
• Physiology
• Ecology (includes field trip to Somerset)
• Basic biochemistry
• Essential skills for biologists

Year 2
• Genes and bioinformatics
• Evolutionary genetics
• Research methods and communication I
• Transmission genetics

*Option modules
• Animal and plant diversity
• Human genetic disorders
• Cell biology and developmental genetics
• Comparative and integrative physiology
• Marine and animal diversity (includes field trip to Millport, Scotland)
• Metabolic pathways
• Microbial physiology and growth
• Membrane and cellular biochemistry
• Ecological interactions I and II (includes field trip to Croatia)
• Engaging the public in science

Year 3
• Research methods and communication II
• Population and chromosome genetics
• Functional genomics and epigenetics

*Option modules
• Mammals and evolution
• Behavioural ecology
• Advanced human genetics and genomics
• Endocrine physiology and biochemistry
• Parasites and infectious disease
• Neuroscience: from molecules to behaviour
• Reproductive and developmental biology
• Species: Dinosaurs to DNA (includes field trip to Canada)
• Savannah ecology and conservation (includes field trip to the African savannahs)

*Optional modules currently available. All modules subject to change.

There is a wide range of options to explore in the Genetics programme such as human genetic disorders, the precise mechanisms of how genes work and developing key lab skills such as PCR, gel electrophoresis and making bacteriophage cultures.”

Mason Connolly, Genetics BSc
Medical Genetics
Our degree programmes

Medical Genetics BSc (3 years)
UCAS code: C431

Medical Genetics BSc with Year Abroad (4 years)
UCAS code: C43Y

Building on our highly successful Genetics BSc, and co-taught by the School of Biological and Chemical Sciences and Barts and The London School of Medicine and Dentistry, our programme offers you a unique opportunity to study medically related topics such as tissue biology, human molecular biology and cancer biology within the context of classical, chromosomal, population and molecular genetics. You will learn about the genetic and molecular basis of human health, development and disease, and explore the evolution of diseases within human populations. You will also gain a valuable introduction to medical research, genetic counselling and bioethics.

All third year students must complete one of the following:
• Biological sciences research project
• Project skills in the life sciences

For further details see: sbcs.qmul.ac.uk/undergraduate

Entry requirements:
A-level: ABB, including A-level biology
IB: 34 points overall with 6,5,5 from three Higher Level subjects including biology
Fees: Home/EU: £9,250, International: £20,850* *2019/20 fees

Course highlights
• Wide array of second and third year optional modules
• Co-taught by the School of Biological and Chemical Sciences and Barts and The London School of Medicine and Dentistry

Recent Employers
• Genomics England
• NHS
• Public Health England
• Institute of Cancer Research*

Recent employment
• Clinical Trials Officer
• Tissue Bank Officer
• Clinical Research Technician

Recent graduates have gone to study
• Biological Sciences MSc
• Genomic Medicine MSc
• Medicine (Graduate Entry Programme) MBBS

*Source: Last five years Queen Mary SBSC alumni database
Medical Genetics
Modules

Year 1
- Practical molecular and cellular biology
- Cell biology
- Evolution
- Molecular genetics
- Practical biology
- Physiology
- Basic biochemistry
- Tissue biology
- Essential skills for biologists

Year 2
- Evolutionary genetics
- Human molecular biology
- Human genetic disorders
- Research methods and communication I
- Transmission genetics

*Option modules
- Cell biology and developmental genetics
- Comparative and integrative physiology
- Basic immunology
- Metabolic pathways
- Microbial physiology and growth
- Engaging the public in science

Year 3
- Research methods and communication II
- Population and chromosome genetics
- Advanced human genetic disorders
- Functional genomics and epigenetics

*Option modules
- Endocrine physiology and biochemistry
- Parasites and infectious disease
- Reproductive and developmental biology
- Cancer biology
- Molecular basis of personalised medicine
- Advanced immunology
- Neuroscience: from molecules to behaviour

*Optional modules currently available. All modules subject to change.

"Studying Medical Genetics has always been a passion of mine and Queen Mary was the ideal university to pursue my passion in understanding genetic based concepts and developing my personality."

Mariam Hafidh Abbas,
BSc Medical Genetics
Neuroscience
Our degree programmes

Neuroscience BSc (3 years)
UCAS code: B140

Neuroscience BSc with Year Abroad (4 years)
UCAS code: B14Y

Remarkable advances in neuroscience make it one of the fastest growing areas in biomedical sciences. Neuroscience is dramatically improving our understanding of the human nervous system, and most notably the brain. Neuroscience is jointly taught by Barts and The London School of Medicine and Dentistry and the School of Biological and Chemical Sciences. You will get a strong foundation in biomedical science provided by core modules during the first two years. You will study neuroanatomy, physiology, biochemistry, molecular biology, genetics and pharmacology. Third-year students will have the opportunity to undertake their own laboratory-based research project or join and work with an existing research group at Queen Mary.

All third year students must complete one of the following:
• Research project in neuroscience
• Project skills in the life sciences

For further details see: sbcs.qmul.ac.uk/undergraduate

Entry requirements:
A-level: ABB including A-level biology or chemistry and a second science subject
IB: 34 points overall with 6,5,5 from three Higher Level subjects including biology and chemistry
Fees: Home/EU: £9,250, International: £20,850* *2019/20 fees

Course highlights
• Great background for students who wish to progress on to medicine or dentistry
• Wide array of second and third year optional modules
• For those interested in studying medicine after graduation, the nineteen highest ranked students across BSc Biomedical Sciences, BSc Neuroscience and BSc Pharmacology and Innovative Therapeutics programmes will be guaranteed an interview for the five year A100 Medicine MBBS degree (Barts and the London). Ranking, and consequent selection for interview will be based on an aggregate of academic ranking (50%) and UKCAT score (50%), and will be made at the end of the second year of study. The top five of these students will also be considered for the four year A101 MBBS Graduate Entry Programme.

Our graduates go on to work in a wide variety of careers:
• Some will pursue a career in neuroscience and pharmaceutical research, industry and the commercial or public sector
• Some will continue with their studies and research through postgraduate study
• Others will transfer the skills they have gained to careers in diverse fields including media, technology and management.
Neuroscience
Modules

Year 1
• Exploring neuroscience
• The human cell
• Chromosomes and gene function
• Biomedical physiology I
• Biomolecules of life
• Tissue biology
• Functional neuroanatomy
• Causes and prevention of disease

Year 2
• Biomedical physiology II
• Human molecular biology
• Cellular and molecular neuroscience
• Membrane and cellular biochemistry
• Biomedical pharmacology
• Systems neuroscience

*Option modules
• Cell biology and developmental genetics
• Comparative and integrative physiology
• Infection immunology and inflammation
• Exploring psychology
• Engaging the public in science
• Health and well-being
• Human genetic disorders

Year 3
• Repair and regeneration in the nervous system
• Perspectives on brain disorders

*Option modules
• Stem cells and regenerative medicine
• Drug discovery and design
• Advanced human genetic disorders
• Molecular basis of disease
• Biomarkers in neuroscience
• Cognitive psychology
• Neuroscience: from molecules to behaviour
• Psychopathology

‘Optional modules currently available. All modules subject to change.

“One thing I really like about my department is that everyone is always happy to help you, which makes such a difference”.

Durdana Ahmed
Neuroscience BSc
Pharmaceutical Chemistry
Our degree programmes

Pharmaceutical Chemistry BSc (3 years)
UCAS code: F154

Pharmaceutical Chemistry BSc with Year Abroad (4 years)
UCAS code: F15Y

Pharmaceutical Chemistry MSci (4 years)
UCAS code: F152

Pharmaceutical Chemistry MSci with Year Abroad (5 years)
UCAS code: F12Y

Pharmaceutical Chemistry with a Year in Industry/Research BSc (4 years)
UCAS code: 2L22

Pharmaceutical Chemistry provides the training required to work in the pharmaceutical industry in the discovery and development of new medicines. You will learn how drugs are designed and optimised from lead compounds, their modes of action and pharmacology, and how they are developed through trials and into manufacture.

Our Pharmaceutical Chemistry MSci includes a fourth year where you undertake an extended research project. You will work as part of a research group conducting original research work. Several of our students have published their work in peer review journals. As part of the Year in Industry/Research BSc, during your second year you will receive 1:1 support to help you to identify and apply for placement opportunities.

If successful, you will spend your third year working in industry or carrying out an extended research project, before returning to Queen Mary for your fourth year. Students taking the MSci will undertake a research project in their fourth year.

All final year BSc students must complete one of the following:
• Chemistry research project
• Chemistry investigative project

For further details on the BSc, MSci and Year in Industry/Research structure, see: sbcs.qmul.ac.uk/undergraduate

Entry requirements:
A-level: BSc - ABB, including A-level chemistry
MSci, BSc year in industry/research - AAB, including A-level chemistry
IB: BSc - 34 points overall with 6,5,5 from three Higher Level subjects including chemistry
MSci, BSc year in industry/research - 35 points overall with 6,6,5 from three Higher Level subjects including chemistry

Fees: Home/EU: £9,250, International: £20,850* *2019/20 fees

Course highlights
• Accredited by the Royal Society of Chemistry, which leads to Associate Member of the Royal Society of Chemistry status
• Promotion opportunity to four-year MSci from the three-year BSc

Recent Employers
• GlaxoSmithKline
• Boots UK
• EY
• ETH Zürich
• Pharmavit*

Recent employment
• Research Scientist in Drug Development
• Science Policy Officer
• Medical Devices Analyst
• Trainee Pharmacy Advisor

Recent graduates have gone to study
• Chemistry PhD
• Physics PhD
• Clinical Drug Development MSc

*Source: Last five years Queen Mary BScS alumni database
Pharmaceutical Chemistry
Modules

Year 1
• Essential skills for chemists
• Foundations of practical chemistry
• Fundamentals of organic chemistry I and II
• Fundamentals of inorganic chemistry
• Fundamentals of physical chemistry
• Fundamentals of spectroscopy
• States of matter and analytical chemistry

Year 2
• Practical chemistry
• Structure and reactivity in organic chemistry I and II
• Solid state and inorganic chemistry
• Pharmaceutical chemistry I and II
• Physical and quantum chemistry
• Applied spectroscopy

*Option modules
• Engaging the public in science
• Introduction to scientific programming

Year 3
• Advanced practical chemistry I
• Organic synthesis
• Advanced pharmaceutical chemistry

*Option modules
• Topics in inorganic chemistry
• Topics in physical chemistry
• Bioorganic chemistry
• Advanced analytical chemistry and spectroscopy
• Computational chemistry
• Topics in biological chemistry

*Optional modules currently available. All modules subject to change.

Students taking the MSci will undertake a research project in their fourth year.

For further details see: sbcs.qmul.ac.uk/undergraduate

I really enjoy working in the lab, I like being in a very practical environment. We get 100 hours of practical work a year, which is quite considerable. The facilities, the useful equipment and the independence you get here when working on your own in the labs is great”.

Nathan Long,
Pharmaceutical Chemistry BSc
Pharmacology and Innovative Therapeutics
Our degree programmes

Pharmacology and Innovative Therapeutics BSc (3 years)
UCAS code: B211

Pharmacology and Innovative Therapeutics BSc with Year Abroad (4 years)
UCAS code: B21Y

Pharmacology is the study of medicines. Identified as a major skills deficit by pharmaceutical and biotechnology industries, this programme was designed in discussion with biopharmaceutical and research leaders to equip graduates to meet the shortfall, or to progress into academic careers, or to apply for entry to training in medicine or dentistry. Led by Barts and The London School of Medicine and Dentistry and co-taught by the School of Biological and Chemical Sciences, you will explore basic, molecular and clinical pharmacology, develop laboratory expertise, and understand the clinical trial and regulatory pathways bringing new drugs from an initial idea through to the patient.

All third year students must complete one of the following:
• Research project in pharmacology
• Project skills in the life sciences

For further details see: sbcs.qmul.ac.uk/undergraduate

Entry requirements:
A-level: ABB including A-level biology or chemistry and a second science subject
IB: 34 points overall with 6,5,5 from three Higher Level subjects including biology and chemistry
Fees: Home/EU: £9,250, International: £20,850* 2019/20 fees

Course highlights
• Opportunity to undertake hands-on supervised research
• Membership of the British Pharmacological Society (BPS)
• Equips graduates to fill high-level skills gaps in the UK's premier industries
• For those interested in studying medicine after graduation, the nineteen highest ranked students across BSc Biomedical Sciences, BSc Neuroscience and BSc Pharmacology and Innovative Therapeutics programmes will be guaranteed an interview for the five year A100 Medicine MBBS degree (Barts and the London). Ranking, and consequent selection for interview will be based on an aggregate of academic ranking (50%) and UKCAT score (50%), and will be made at the end of the second year of study. The top five of these students will also be considered for the four year A101 MBBS Graduate Entry Programme.

Our graduates will go on to work in a wide variety of careers:
• Pharmaceutical and biotechnology industries
• Medicines regulation
• Research and academia - top graduates are eligible to apply for sponsored doctoral training in the William Harvey Research Institute, a ‘UK Pharmacology on the Map’ award recipient and the largest pharmacology research institute in the UK
Pharmacology and Innovative Therapeutics

Modules

*Optional modules currently available. All modules subject to change.

Year 1
- The human cell
- Chromosomes and gene function
- Causes and prevention of disease
- Research skills for pharmacology
- Biomedical physiology I
- Biomolecules of life
- Tissue biology
- Introduction to pharmacology

Year 2
- Biomedical physiology II
- Human molecular biology
- Clinical pharmacology and assessment of drug safety
- Drug target identification
- Infection, immunology and inflammation
- The business of pharmacology

*Option modules
- Essential biochemistry for human life
- Membrane and cellular biochemistry
- Cellular and molecular neuroscience
- Engaging the public in science
- Human genetic disorders

Year 3
- Drug design for pharmacologists
- Translational pharmacology and innovative therapeutics
- Classic papers and current topics in pharmacology
- Clinical trials and regulatory affairs

*Option modules
- Stem cells and regenerative medicine
- Advanced immunology
- Advanced human genetic disorders
- Cancer biology
- Molecular basis of personalised medicine
- Biomarkers in neuroscience

*Optional modules currently available. All modules subject to change.

What I enjoy most about my degree is being taught by lecturers who are actively involved in innovative, life-changing research“

Chidimma Umelo
Pharmacology and Innovative Therapeutics BSc
Psychology
Our degree programmes

Psychology BSc  
UCAS code: C800

Psychology BSc with a Year Abroad (4 years)  
UCAS code: C80Y

Psychology BSc with Professional Experience  
UCAS code: C80P

Our Psychology students learn about cognitive, social, developmental and abnormal psychology and apply this knowledge in topics such as counselling and health psychology. Students also get the opportunity to explore the origins of the human mind and behaviour drawing on animal cognition, neuroscience and behavioural genetics and epigenetics. Our programme is accredited by the British Psychological Society (BPS). This gives graduates the opportunity to gain Graduate Membership of the society* and acts as a mark of quality that employers value. You can also apply for our Psychology BSc with Professional Experience for the opportunity to develop real world skills and put your learning into context.

All third year students must complete one of the following:*  
• Extended essay in psychology  
• Psychology research project

For further details see: sbcs.qmul.ac.uk/undergraduate

*To be eligible for the Graduate Basis for Chartered Membership in the BPS, you must successfully complete the psychology research project in your third year and gain at least a Second Class Honours degree (i.e. an overall pass mark of at least 50%).
Psychology Modules

Year 1
• Exploring psychology I and II
• Research methods and statistics in psychology I
• Brain and behaviour
• Introduction to biopsychology
• Positive psychology
• Essential skills for psychologists

*Option modules
• Language acquisition
• Physiology
• Society, medicine and health
• Emotion

Year 2
• Cognitive psychology
• Research methods and statistics in psychology II
• Social psychology
• Comparative psychology
• Developmental psychology
• Psychopathology
• Individual differences

*Option modules
• Engaging the public in science
• Health and well-being

Year 3
• History and philosophy of psychology

*Option modules
• Behavioural ecology
• Design for human interaction
• Psychology of creativity
• Psychology of food
• Psychology of play and games
• Mammals and evolution
• Cognitive and affective neuroscience
• Social development
• Critical approaches to psychology research
• Counselling psychology
• Behavioural epigenetics
• Language and mind
• Nature, nurture and mental health
• Health psychology

*Optional modules currently available. All modules subject to change.

The Psychology programme has a very strong scientific focus which is exactly what I was looking for. It’s very interactive and we learn a lot that’s relevant to us right now.”

Isha Malhotra
Psychology BSc
Zoology
Our degree programmes

Zoology BSc (3 years)
UCAS code: C300

Zoology BSc with Year Abroad (4 years)
UCAS code: C30Y

Queen Mary has a long record of research achievement in understanding the structure, physiology, ecology and behaviour of animals – from microscopic creatures to turtles, seals, whales and dolphins. As a zoology student, you will receive a thorough grounding in vertebrate and invertebrate biology. To complement this, we offer modules in physiology, behaviour, evolution and neurobiology. Modules in molecular and population genetics, ecology, statistics and immunology are also available. There is a strong emphasis on fieldwork*, with compulsory and option modules taking students to locations across the UK and internationally, from South Africa to study tropical ecology to the coasts of Britain to study marine life.

All third year students must complete one of the following:
• Biological sciences research project
• Project skills in the life sciences

For further details see: sbcs.qmul.ac.uk/undergraduate

*For further details about fieldwork, including costs, go to page 72.

Entry requirements:
A-level: ABB, including A-level biology
IB: 34 points overall with 6,5,5 from three Higher Level subjects including biology
Fees: Home/EU: £9,250, International: £20,850* **2019/20 fees

Course highlights
• Wide array of second and third year optional modules
• Hands-on experience from field trips*

Recent employment
• Veterinary Nurse
• Graduate Ecologist
• Assistant Ranger
• Trainee Nature Reserve Warden

Recent employers
• Kent Wildlife Trust
• London Wildlife Trust
• Forestry Commission
• The Environment Partnership*

Recent graduates have gone to study
• Evolutionary Biology PhD
• Ecology, Evolution and Conservation MSc
• Ecology and Evolutionary Biology MSc

*Source: Last five years Queen Mary SBCS alumni database
**Fieldwork entails an additional cost. See page 72 for further details
Zoology Modules

**Year 1**
- Practical molecular and cellular biology
- Cell biology
- Evolution
- Molecular genetics
- Practical biology
- Physiology
- Ecology (includes field trip to Somerset)
- Basic biochemistry
- Essential skills for biologists

**Year 2**
- Animal and plant diversity
- Comparative and integrative physiology
- Research methods and communication I

*Option modules*
- Genes and bioinformatics
- Cell biology and developmental genetics
- Evolutionary genetics
- Marine and animal diversity (includes field trip to Millport, Scotland)
- Transmission genetics
- Microbial physiology and growth
- Ecological Interactions I and II (includes field trip to Croatia)
- Engaging the public in science

**Year 3**
- Research methods and communication II
*Option modules*
- Mammals and evolution
- Behavioural ecology
- Endocrine physiology and biochemistry
- Population and chromosome genetics
- Functional genomics and epigenetics
- Neuroscience: from molecules to behaviour
- Parasites and infectious disease
- Reproductive and developmental biology
- Species: Dinosaurs to DNA (includes field trip to Canada)
- Savannah ecology and conservation (includes field trip to the African savannahs)
- Climate change and conservation challenges

*Optional modules currently available. All modules subject to change.*

"Zoology is the perfect course for anyone with an interest in the science of the natural world. It’s a course with plenty of hands on action, which takes you to lots of incredible places and gives you the chance to experience what life as a scientist is like."

**Joshua Pope,**
Zoology BSc
Laboratories and Facilities

We have outstanding research and teaching facilities at Queen Mary. From our EEG lab for monitoring neural reactions, to our recently refurbished category II multi-user teaching laboratories for biology and chemistry programmes, to some of the largest open-plan laboratories in Europe for our biomedical programmes, you can be sure you will have modern facilities to support your studies.

Our biology and psychology students study and research in our G. E. Fogg building, which recently underwent a £4.5 million refurbishment. The home of our chemists, the Joseph Priestley building, recently benefited from a £5.2 million investment into a new undergraduate teaching lab. This investment into the lab has added an additional 30 fume cupboards, a new teaching zone and benching for modern equipment. The design itself is similar to commercial laboratories, which will prepare students for the next stage of their careers. Both are based at our Mile End campus.

We have also invested over £1m in equipment for biology. This continues a campus-wide upgrade of facilities, including our new £39m Graduate Centre, which opened in 2017.

Students on our biomedical programmes who are co-taught by the School of Biological and Chemical Sciences and Barts and The London School of Medicine and Dentistry will divide their time between our Mile End, Whitechapel and Charterhouse Square campuses, all of which are within easy travelling distance of each other.

From practical sessions on anatomy and physiology in our Mile End campus, to using state-of-the-art science and medical facilities in our Blizard Building in Whitechapel or in Charterhouse Square, students on our biomedical programmes will be able to make use of excellent facilities and learning resources.

Most of our programmes offer final year students the opportunity to carry out a research project, which is a great opportunity to develop research skills. You will be fully supported by a member of staff and will carry out research using the same laboratories as senior academic researchers.
Fieldwork

Fieldwork is an attractive option for students on our Zoology programme, taking learning out of the lecture theatre and into the real world.

From hunting dinosaur fossils in Canada and filming leopards in South Africa, to looking for seals in Scotland and scouting for snails in Somerset, our residential field trips will give you a range of practical skills as well as being an unforgettable experience.

Many of our field courses are also available as option modules on our biology and genetics programmes. We cover all costs for compulsory fieldwork in the UK, and subsidise overseas fieldwork option modules. Take a look at the programme descriptions on pages 26-69 for more details.

Fieldwork costs
Compulsory fieldwork will not cost you anything extra. For option overseas fieldwork, you will need to contribute up to £150 plus the cost of your flight. (based on costs in the year 2018/19). Full and partial bursaries are available. Destinations can vary year-on-year, are subject to availability, and depend on the modules you choose. For more information, visit: sbcs.qmul.ac.uk

Photo courtesy of Dr Rob Knell.
Living in London

As one of the world’s most exciting and culturally diverse cities, London is a great place to be a student: you’ll never run out of things to see and explore.

London is also a global hub at the centre of professional, cultural, government and academic networks: a great place to kick start your career.

With nearly 400,000 students in London, it’s a fantastic place to study. There’s always something going on, including hundreds of free events every week. Your student card will also give you a reduction on a surprising number of events and services, including transport.

- Over 300 museums and galleries
- One of the greenest cities on earth
- Multicultural cuisine
- Exceptional music and nightlife
- Outstanding markets

Find out more: www.qmul.ac.uk/studentlife/social/london/

Timothy Deng Hong Loong
Neuroscience BSc

What do you enjoy about living in London?
London is probably my favourite city in the world. There is a buzz about London that I haven’t found in any other place I’ve visited. My favourite thing about the city is that it’s so international. I really enjoy visiting the different markets across the city. There is always something new to try and if you’re after some comfort food from home, you’ll most likely be able to find it. There are also loads of concerts and festivals to attend which take place all year round. London is one of the most well-connected cities in the UK and Europe. Going on a weekend trip is as easy as hopping on a train or a plane so it’s very convenient to visit other countries.

What are the benefits of studying in London?
Many of the top companies in the world have headquarters set up in London. These organisations frequently organise talks and are present at careers fairs. This gives students great access to these potential employers as well as useful knowledge to help understand what they are looking for in a graduate. Understanding an organisation is crucial to applying for a job so living in a business and commercial hub has been really useful. Queen Mary organises a huge range of careers events too so keep a look out for them. In addition, some of the leading researchers and research organisations are also based in London. There are regular seminars with prestigious researchers held at Queen Mary and across London which are free to attend and open to all. They are very insightful and allow students to keep up-to-date with the latest research taking place across many fields.

Any advice for other students considering doing their degree at a London university?
Go for it! London is truly one of the most vibrant cities in the world and if you like exploring new places and seeing new things, this is the place for you. Queen Mary constantly provides us access to many different aspects of the city, be it through trying new activities with the Students’ Union, visiting top London organisations through the Careers and Enterprise service or opportunities to engage with the latest research in our field of study. Being able to live on campus at a university in London gives students easy access to lots of opportunities that the city has to offer. London is a city like no other and a degree in London is an opportunity not to be missed.
Student Life

Queen Mary Students’ Union (QMSU)
All Queen Mary students automatically become a member of QMSU, an active and flourishing students’ Union run by students, for students. QMSU is best known for its clubs and societies, which provide a great opportunity for meeting people - especially those who are studying a different subject to you. One of the aims of QMSU is to ensure that your time at university is not just about work, but also includes socialising and personal development.

Qmotion
Qmotion is Queen Mary’s Health and Fitness centre. Equipped with a great range of exercise machines and weights, there is also a women-only area and a number of exercise classes. There is a squash court and sports hall on campus, and a swimming pool a short distance away.

Sports
Playing sports is a good way to relax after a day spent studying. Our sports teams regularly compete against other university teams, and there’s a great social scene with after-match drinks and a regular social night, Hail Mary, which is hosted by a different Students’ Union sports team each month.

Volunteering
Volunteering with charities and non-profit organisations is a brilliant way to explore what London has to offer, make a difference and really get involved in your local area. You can do anything from mentoring local school students or volunteering in local hospitals, to becoming a helpline volunteer or managing a local sports team. See: www.qmsu.org/volunteering

Student support
You will be assigned an academic adviser when you begin your time at Queen Mary who will stay with you throughout your studies. Your adviser will help you choose modules, sign any forms you need and help you with any academic or personal problems that you have. Most students find it extremely helpful to have one adviser on hand throughout their time at Queen Mary. You will also have a dedicated Student Support Officer in your department who can give you additional advice and support with your studies.

Health services
Health services are provided for all students living in the London Borough of Tower Hamlets. Students should register with the Globe Town surgery at the Student Health Centre at the beginning of term. Students living outside Tower Hamlets can be treated on campus in the event of an urgent medical situation. For more information see: www.globetown.org

Advice and counselling
Our advice service offers in-depth and specialist advice on a range of financial, practical and legal issues such as student finance, housing rights, immigration law and international student issues. Counselling is also available. Our Advice and Counselling service is a completely free and confidential service. For more information see: welfare.qmul.ac.uk
Applying and Funding

For undergraduate programmes, all students, including international and mature students, must apply online through the Universities and Colleges Admissions services (UCAS): ucas.com

The only exception is for any students applying to the one-year International Science and Engineering Foundation Programme (ISEFP); find out more about the application process at: sefp.qmul.ac.uk/international

You can find further details on the UCAS application process on its website; alternatively, our own step-by-step guide to applying can be found at: qmul.ac.uk/undergraduate/apply

UCAS will start receiving applications from mid-September for entry in the following autumn.

Applications from UK-based applicants should reach UCAS by 15 January. Later deadlines apply to international applicants but early application is recommended.

The institution code for Queen Mary is Q50.

Tuition fees
Fees are charged at a Home/EU rate for UK and EU nationals, and an overseas rate for international students. To find out more about how your tuition fee status is assessed, see: welfare.qmul.ac.uk/money

Like many universities in England, Queen Mary’s annual tuition fee for full-time UK and EU students is £9,250. However, you will not have to pay your fees up front – the government will lend eligible students the money, which you will have to start paying back once you have left university and are earning at least £25,000. For more information, please see: qmul.ac.uk/undergraduate/feesandfunding/ tuitionfees

For information on field trip costs which are not included in your tuition fees, please see page 72 and sbcs.qmul.ac.uk

Scholarships and bursaries
Queen Mary has a substantial package of scholarships and bursaries which will benefit around 50 per cent of our undergraduate student body.

The Science and Engineering Excellence Scholarships are awarded to Home/EU students on the basis of academic excellence. Each award consists of £3,000 paid directly to you. For more information on scholarships on offer at Queen Mary University of London, please see: qmul.ac.uk/scholarships

The Queen Mary Global Excellence Scholarships are for outstanding international students and are awarded on the basis of academic excellence. Each award consists of a £3,000 tuition fee reduction. For more information on international scholarships on offer at Queen Mary University of London, please see: qmul.ac.uk/scholarships

Financial advice
We offer specialist support on all financial and welfare issues through our Advice and Counselling Service, which you can access as soon as you have applied for a place at Queen Mary. For more information, visit the Advice and Counselling service website: welfare.qmul.ac.uk or call +44 (0)20 7882 8717.
Accommodation

Queen Mary has one of the largest residential campuses in London at Mile End, only 15 minutes by tube to Oxford Street, Covent Garden and the West End. Living on campus is fun and convenient – not to mention a great way to experience London’s vibrant East End.

• We guarantee accommodation to all first year undergraduate and foundation students. Find out more about eligibility: [qmul.ac.uk/accommodation](http://qmul.ac.uk/accommodation)

• With fees starting from around £135 per week, our halls of residence offer a range of affordable accommodation.

• We can help you live on or near our campuses in Mile End, Whitechapel and Charterhouse Square.*

• Our housing advisers can also help you find a range of alternative housing solutions, as well as the right flatmates through our Find a Flatmate events and Student Share message board.

Find the accommodation that’s right for you: [qmul.ac.uk/accommodation](http://qmul.ac.uk/accommodation)

For all accommodation queries, contact us on:

Tel: +44 (0)20 7882 6474
email: residences@qmul.ac.uk

*Neuroscience and Pharmacology and Innovative Therapeutics students may be housed in Whitechapel and Charterhouse Square campus accommodation.
Whitechapel campus

For more detailed campus information, see: qmul.ac.uk/about/howtofindus

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Information

- Smoking is prohibited on campus.
- Electronic cigarettes permitted on College Campus outside spaces only
- These premises are alarmed and monitored by CCTV; please call Security on +44 (0)20 7882 5000 for more information.

Key

- Library/bookshop
- Refreshment: Bar/Eatery/Coffee place
- Bicycle parking

Charterhouse Square Campus

For more detailed campus information, see: qmul.ac.uk/about/howtofindus

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Information

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- Electronic cigarettes permitted on outside spaces only
- These premises are alarmed and monitored by CCTV; please call Security on +44 (0)20 7882 5000 for more information.

Key

- Fitness centre
- Refreshment: Bar/Coffee place
- Staff car park
- Bicycle parking
Terms and conditions

1 Rules and regulations
The offer of, and acceptance of, a place at Queen Mary is made on the understanding that you undertake to observe the terms and conditions of our Academic Regulations and related policies. These cover, among other things, payment of fees, attendance at classes, submission of work, attendance at examinations, student discipline, complaints procedure, freedom of speech and equal opportunities policies. To read the Academic Regulations and related policies, visit: arcs.qmul.ac.uk/policy

2 Changes to our programmes
Queen Mary will aim to deliver your programme so that it closely matches the way in which it has been described to you by Queen Mary in print, online, and/or in person. However, it is important to realise that in some circumstances we may change aspects of your programme. For example, staff changes, resource limitations and factors such as a change in the law or the level of demand for a particular programme or module may result in Queen Mary having to withdraw or change aspects of the programmes and/or student services described in this prospectus.

In the unlikely event that we discontinue a programme of study, or change it significantly before it begins, we will inform applicants holding an offer of a place at the earliest opportunity and will endeavour to offer a suitable alternative programme at Queen Mary. We will also ensure that these changes are reflected on our website as soon as possible.

3 Liability for damage to person or property
Queen Mary does not accept responsibility or liability for any damage to students’ property, the transfer of computer viruses to students’ equipment, or personal injury to students caused by the misuse or unauthorised use of Queen Mary equipment, or owing to students not taking due care while on Queen Mary premises, or engaged in Queen Mary activities.

4 Accuracy of information in this prospectus
Queen Mary has made reasonable efforts to ensure that the information provided in this prospectus is both helpful and accurate at the time of going to press. However, this information is subject to change over time. For this reason, it is important that you check the website for the most up-to-date information (qmul.ac.uk) or contact us using the details contained within the document.

Applicants are strongly advised to check the Queen Mary Course Finder for up-to-date entry requirements before submitting their UCAS application: qmul.ac.uk/undergraduate/coursefinder

Read our terms and conditions in full at: qmul.ac.uk/prospective/termsandconditions

Contact
Queen Mary University of London, Mile End Road, London E1 4NS www.qmul.ac.uk

We would like to thank the students who took part in these photographs. Student and departmental photography by Dr David Hone and Dr Rob Knell, Jorge Estevao (jdestevao.com) Ray Crundwell Layton Thompson (laytonthompson.com) (raycrundwell.com) and Jonathan Cole (www.JonathanColePhotography.com)

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