

## Undergraduate study 2019

Biological Sciences  
Biomedical Sciences  
Chemical Sciences  
Psychology



Proud to be a member  
of the Russell Group

[sbcs.qmul.ac.uk](http://sbcs.qmul.ac.uk)



Biology, Psychology, Biomedical Sciences and Zoology students with our School mascot Queenie, a *Tyrannosaurus rex* skull cast

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\*Source: Destination of Leavers from Higher Education Survey, 2015

Students by our G.E. Fogg building, home to our recently refurbished teaching laboratories



## 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 department, 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. **91 per cent of all our graduates are in employment or further study within six months of graduating.\***



**“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 (2019)**

# Why choose Queen Mary University of London?

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.

## One of the UK's leading universities

- Member of the Russell Group – one of the UK's 24 leading universities
- 24,000 – average salary of our undergraduates six months after completing their course (Destination of Leavers from Higher Education survey, 2015/16)
- Teaching inspired by our world-leading research
- Seven Nobel Prize-winners among former staff and alumni
- Top 10 university in the UK for the quality of our research – (Research Excellence Framework 2014)
- Distinguished history dating back to 1123 (the foundation of St Bartholomew's Hospital)

## 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

## Generous support

- Generous package of bursaries and scholarships
- 234 of our currently enrolled students received a scholarship in 2017/18

## We are international

- Part of the internationally recognised University of London (UoL)
- Students and staff from over 155 countries
- Links with leading international universities, and opportunities to study abroad on many programmes
- One of the top 25 'most internationally diverse' universities in the world (Times Higher Education, 2016)

## Exceptional facilities

- £105m spent on new facilities over the past five years
- Some of the largest open-plan laboratories in Europe in the Blizzard Building
- 7,700 square metres of new learning and teaching space with the £39m Graduate Centre which opened in 2017



15 mins

TO THE GALLERY SPACES AND CAFÉS OF HACKNEY WICK



14 mins

TO THE BARS OF HOXTON SQUARE



11 mins

TO SHOREDITCH HIGH STREET



13 mins

TO QUEEN ELIZABETH OLYMPIC PARK



4 mins

TO BEAUTIFUL VICTORIA PARK



## 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 many of our programmes, including, Chemistry, Pharmaceutical Chemistry and Psychology
- 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

“Being a student in such a cosmopolitan city like London has its own special atmosphere. You have the chance to meet people all around the world”

Lilla Gombos, Pharmaceutical Chemistry MSci (2018)

Looking west across Queen Mary's London: in the background on the left you can see The Shard; on the right-hand side you can see the iconic shape of the Gherkin in the City



“The best thing about my time at Queen Mary was how engaged the staff were in what they were teaching. I could ask any question and get an informed answer, and I felt very involved in a discussions rather than just memorising facts”

Lucy Wyatt, Biology BSc (2013)

# Studying Biological Sciences, Biomedical Sciences, Chemical Sciences or Psychology

Students in our Blizard Institute's Perrin Lecture Theatre at our Whitechapel campus.

Our programmes span the biological, chemical and biomedical sciences, as well as psychology. Each of our degree programmes will introduce you to the key academic principles and techniques in your chosen field, whether that's the study of the mind, computational chemistry, or ecology and evolution. You will be taught by staff who are world-leading researchers in their field and you will experience research-led teaching.

All our biomedical programmes are co-taught between Queen Mary's 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.

Find out more about each of our streams of study over the page – you can find more detailed information about each course on pages 24 - 45.



“I really enjoy the practical, problem-solving aspect of my degree - how we are taught the skills to solve a problem, rather than just memorising facts and information”

Clayton Bevas, Chemistry BSc (2017)



# Studying Biological Sciences, Biomedical Sciences, Chemical Sciences or Psychology

## Biological Sciences

Biology BSc - UCAS code: C100

Genetics BSc - UCAS code: C400

Zoology BSc - UCAS code: C300

These programmes span the whole of the biological sciences, from the study of organisms and conservation to molecular biology and plant life. These courses offer many opportunities for fieldwork in the UK and abroad.\*

## Biomedical Sciences

Biomedical Sciences BSc - UCAS code: B990

Medical Genetics BSc - UCAS code: C431

Neuroscience BSc - UCAS code: B140

Pharmacology and Innovative Therapeutics BSc - UCAS code: B211

Students interested in medically-related subjects will be attracted by these well-ranked undergraduate programmes co-taught by the School of Biological and Chemical Sciences and Barts and The London School of Medicine and Dentistry.

## Chemical Sciences

Biochemistry BSc (3 years) UCAS code: C700

Biochemistry MSci (4 years) UCAS code: C701

Biochemistry BSc with a year in industry/research (4 years) UCAS code: 3W45

Chemistry BSc (3 years) UCAS code: F100

Chemistry MSci (4 years) UCAS code: F103

Chemistry BSc with a year in industry/research (4 years) UCAS code: 9A32

Pharmaceutical Chemistry BSc (3 years) UCAS code: F154

Pharmaceutical Chemistry MSci (4 years) UCAS code: F152

Pharmaceutical Chemistry BSc with a year in industry/research (4 years) UCAS code: 2L22

The science of chemistry underpins all aspects of modern life, from human health and medicine to manufacturing. These programmes will give you a good grounding in all traditional areas of chemistry (inorganic, organic and physical), as well as growing areas such as computational chemistry.

## 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](http://www.qmul.ac.uk/international/global-opportunities)

## Psychology

Psychology BSc - UCAS code: C800

This degree will offer you the chance to study mental processes and behaviour of humans and animals. Our programme has an emphasis on the biological and neuro-scientific perspective, which sets us apart from many other psychology degrees that are often based in social science departments.

# Foundation programmes

**Foundation programmes at Queen Mary provide students with alternative routes onto undergraduate degrees. As a foundation student, you have access to all Queen Mary's facilities and will be a full-time student of the university.**

Our Science and Engineering Foundation Programme (SEFP) combines a foundation year with a traditional university degree in an integrated four- or five-year programme (1+3 or 1+4). Successful completion of the SEFP guarantees you a place on a relevant degree programme without having to re-apply through UCAS.

The SEFP is 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; go to the foundation website to find full details: [sefp.qmul.ac.uk](http://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

## **Biological Sciences (5 year). UCAS code: CCY1**

- Degree progression opportunity for Biochemistry MSci at Queen Mary

## **Chemistry (4 year). UCAS code: FFX1**

- Degree progression opportunities on the following programmes at Queen Mary: Chemistry BSc or Pharmaceutical Chemistry BSc

## **Chemistry (5 year). UCAS code: FFY1**

- Degree progression opportunities on the following programmes at Queen Mary: Chemistry MSci or Pharmaceutical Chemistry MSci

## **International Science and Engineering Foundation Programme**

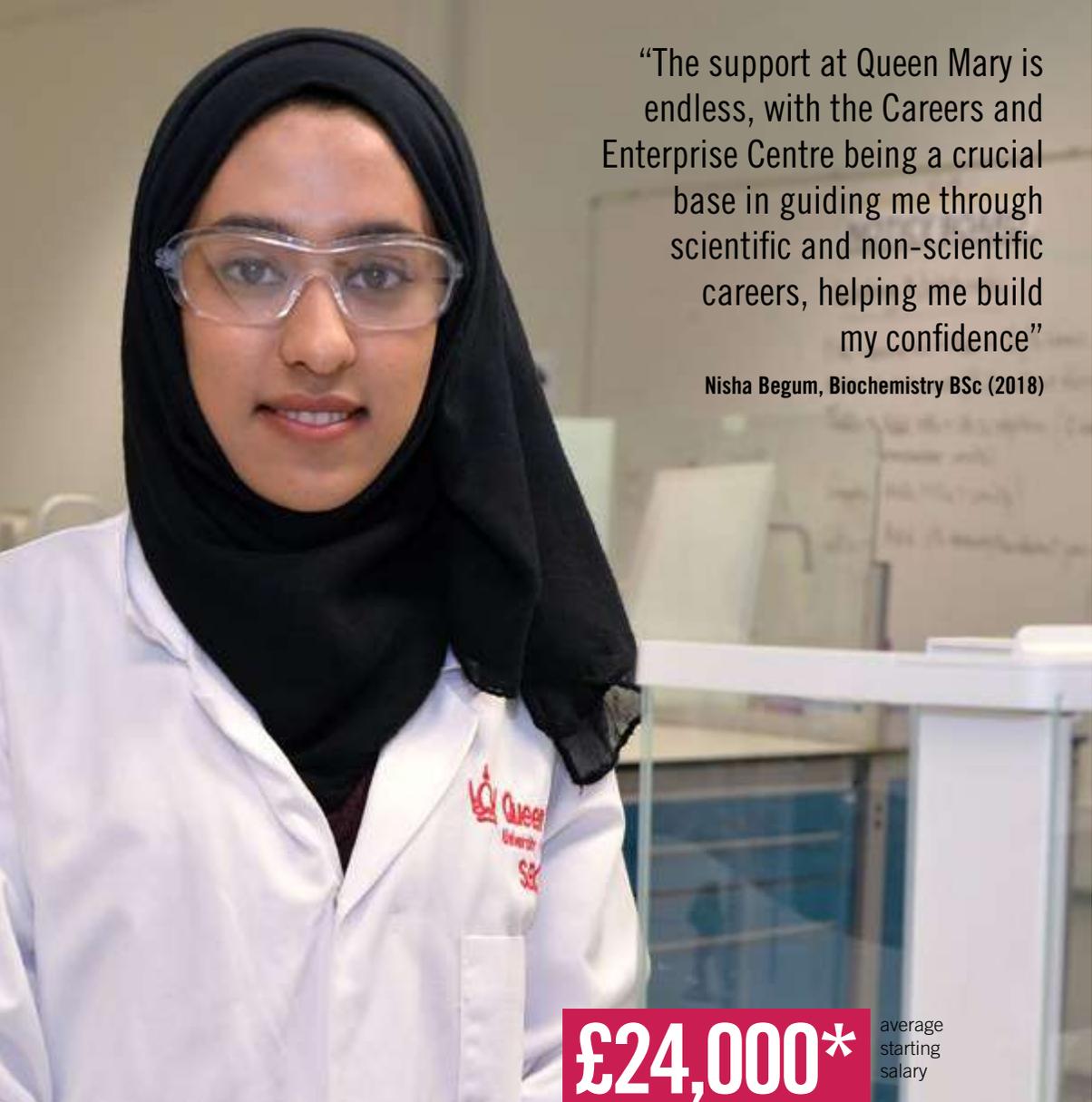
We also offer an International Science and Engineering Programme (ISEFP), a one-year programme that offers pathways onto undergraduate degrees across science and engineering. The ISEFP is aimed at international students who have AS-level/Year 12 equivalent qualifications, i.e. students who may not have had the opportunity to study to A-level standard.

Go to the foundation website to find out more about the programmes: [sefp.qmul.ac.uk](http://sefp.qmul.ac.uk)



**“Everyone at Queen Mary has been really welcoming - as an SEFP student, there is a lot of support available and I have really enjoyed becoming part of the Queen Mary student community”**

**Nikita Ramrattan, Science and Engineering Foundation Programme - Biological Sciences (2017)**



“The support at Queen Mary is endless, with the Careers and Enterprise Centre being a crucial base in guiding me through scientific and non-scientific careers, helping me build my confidence”

Nisha Begum, Biochemistry BSc (2018)

**£24,000\***

average starting salary

## Careers

You will have excellent career prospects with a BSc 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 91 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 leaving 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.

### Our links with industry

We have well-established research and teaching links with institutions such as the Natural History Museum and Kew Gardens, as well as close links to industry partners such as GlaxoSmithKline and the Environment Agency.

### 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, 2015/16

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

## 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 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
- GlaxoSmithKlein
- Government Office for Science
- Great Ormond Street Hospital
- Institute of Cancer Research
- Lloyds Banking Group
- 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

**91%\***

of our graduates are in work or further study within six months of graduation. *Destination of Leavers from Higher Education Survey, 2015/16*

“One of the best facilities available is the Careers and Enterprise Service - they offer help with anything, from advice on how to improve your CV to conducting mock interviews”

Jane Smith, Chemistry MSci (2016)

## 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.

Students in our Careers and Enterprise Centre





# How will I study?

## 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.

## Personalise your degree programme

Our degree programmes offer you a broad range of skills and experiences to make sure that by the time you graduate, you can apply yourself to whatever you choose to do next.

The QMUL Model is an innovative approach to degree-level study which means you have more opportunities to develop a range of skills as part of your degree - whether that's entrepreneurial skills or understanding social and ethical issues. When you join us, you'll see we have included options within your first year that lay the foundations of these key skills. Find out more: [www.qmul.ac.uk/undergraduate/whyqm/teaching/index.html](http://www.qmul.ac.uk/undergraduate/whyqm/teaching/index.html)

## 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 (eg 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.

The main examination period is May until June. Exams 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. 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

#### Year 1

- Practical molecular and cellular biology
- Cell biology
- Molecular genetics
- Fundamentals of organic chemistry
- Practical biochemistry
- Physiology
- Basic biochemistry
- Essential skills for biochemists

#### Year 2

- Techniques for biological and chemical sciences
- Genes and bioinformatics
- Biochemistry communication
- Membrane and cellular biochemistry
- Metabolic pathways

#### \*Option modules

- Comparative and integrative physiology
- Cell biology and developmental genetics
- Cellular and molecular neuroscience

- Structure and reactivity in organic chemistry I and II
- Microbial physiology and growth
- Transmission genetics
- Pharmaceutical chemistry I and II

Plus one QMUL Model module

#### Year 3

- Biochemistry communication
- Membrane proteins
- Molecular basis of disease
- Enzyme catalysis
- Protein structure, folding and assemblies

#### \*Option modules

- Endocrine physiology and biochemistry
- Organic synthesis
- Neuroscience: from molecules to behaviour
- Functional genomics and epigenetics

\*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](https://sbcs.qmul.ac.uk/undergraduate)

“I enjoy the wide range of topics my degree covers: teaching on biology, chemistry and physics is really integrated. This approach helps to develop my scientific understanding of real-life situations”

Alyssa Miller, Biochemistry BSc (2018)

#### Entry requirements:

**A-level:** AAB, including A-level chemistry (MSci, BSc year in industry/research)/ ABB, including A-level chemistry (BSc)

**IB:** 35 points overall with 6,6,5 from three Higher Level subjects including chemistry (MSci, BSc year in industry/research) / 34 points overall with 6,5,5 from three Higher Level subjects including chemistry (BSc)

**Fees:** Home/EU: £9,250, International: £19,000\* \*2018/19 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
- Lonza
- The Exchange Lab
- TNS\*

#### Recent employment

- Clinical Biochemist
- Business Analyst and Management Trainee
- Data Analyst

#### Recent graduates have gone to study

- Life Science PhD
- Algal Biofuel PhD
- Graduate Medicine MBBS

\*Source: Last five years Queen Mary SBSC alumni database



“I am currently in the first year of my fully-funded PhD with the University of Bath. Without the experience and qualifications from Queen Mary I would not have been able to continue on this path”

Olivia Tasker,  
Biology BSc (2016)

**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: £19,000\* \*2018/19 fees

**Course highlights**

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

**Recent Employers**

- NHS England
- All Hallows Hospital
- National Hospital for Neurology and Neurosurgery
- GlaxoSmithKline
- Deloitte
- EY\*

**Recent employment**

- Graduate Civil Service
- Graduate Funds Trainee
- Data Analyst

**Recent graduates have gone to study**

- Ecology and Conservation MSc
- Public Health MSc
- Environmental Engineering MSc

# Biology

## Our degree programmes

**Biology BSc**

UCAS code: C100

**Biology BSc with Year Abroad (4 years)**

UCAS code: C10Y

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](http://sbcs.qmul.ac.uk/undergraduate)

For further details about fieldwork, including costs, go to page 48.

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

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

**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

**\*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)

Plus one QMUL Model module

**Year 3**

- Research Methods and Communication II

**\*Option modules**

- Behavioural ecology
- Membrane proteins
- Endocrine physiology and biochemistry
- Mammals and evolution
- Environmental microbiology
- Molecular basis of disease
- Population and chromosome genetics
- Ecological and evolutionary genomics
- 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)
- Tropical ecology and conservation (includes field trip to the African savannahs)
- Climate change and conservation challenges

# 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](http://sbcs.qmul.ac.uk/undergraduate)

#### Year 1

- Essential skills for biomedical scientists
- Chromosomes and gene functions
- Human anatomy
- The human cell
- The microbial world and humans
- Biomedical physiology I - exchange, movement and integration
- Biomolecules of life
- Tissue biology
- Biomedical Science Case Approach to Problem Solving

#### Year 2

- Biomedical physiology II - cardiovascular respiratory
- Human molecular biology
- Techniques in biomedical sciences
- Basic immunology
- Clinical microbiology
- Essential biochemistry for human life
- Biomedical pharmacology

#### \*Option modules

- Cell biology and developmental genetics
- Comparative and integrative physiology
- Human genetic disorders

- Grand challenges in the natural sciences
- Health and wellbeing
- Philosophy and business of science
- Introduction to scientific programming
- Engaging the public in science

#### Year 3

- Biomedical science case approach to problem solving
- Cellular pathology and blood science

#### \*Option modules

- Clinical pharmacology
- Infectious diseases
- Human genetics and genomics
- Oral biology
- 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.

#### 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: £21,500\* \*2018/19 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
- Red Cap Pharmacy
- London Imaging Centre
- NHS Trust
- Great Ormond Street Hospital\*

#### Recent employment

- Trainee Biomedical Scientist – NHS Hospital
- Medical Laboratory Scientist
- Clinical Research Assistant

#### Recent graduates have gone to study

- Medicine (Graduate Entry Programme) MBBS
- Dentistry BDS
- Clinical Neuroscience PhD



“Studying Biomedical Sciences at Queen Mary enabled me to develop both my scientific knowledge and my interpersonal skills. Without a doubt studying at Queen Mary has helped me get to where I am today”

Kelechi Nwankpa,  
Biomedical Sciences BSc (2016),  
currently studying Medicine MBBS

\*Source: Last five years Queen Mary SBCS alumni database

# 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. 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.

#### 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

All final year BSc students must complete one of the following:

- Chemistry research project
- Chemistry investigative project

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

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

#### Plus one QMUL Model module Year 3

- Advanced practical chemistry
- Organic synthesis
- Topics in inorganic chemistry
- Topics in physical chemistry
- Computational chemistry
- Literature project in chemistry (MSci students only)

#### \*Option modules

- Bioorganic chemistry
- Advanced analytical chemistry and spectroscopy

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



“Chemistry is a rich and diverse subject as it helps explain the workings within the wonderful and complex world in which we live”

Dr Tippu Sheriff,  
Lecturer in Chemistry

#### Entry requirements:

**A-level:** AAB, including A-level chemistry (MSci, BSc year in industry/research) / ABB, including A-level chemistry (BSc)

**IB:** 35 points overall with 6,6,5 from three Higher Level subjects including chemistry (MSci, BSc year in industry/research) / 34 points overall with 6,5,5 from three Higher Level subjects including chemistry (BSc)

**Fees:** Home/EU: £9,250, International: £19,000\* \*2018/19 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

- M&A Pharmachem
- Catalent Pharma Solutions
- GlaxoSmithKine
- Hammersmith Medicines Research\*

#### Recent employment

- Synthetic Chemist
- Chemistry Researcher
- Market Analyst

#### Recent graduates have gone to study

- PhD in Chemistry
- PhD in Artificial Photosynthesis
- Energy MRes

### 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: £19,000\* \*2018/19 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
- Softcat
- Kerry Group\*

### Recent employment

- Laboratory Scientist
- Research Assistant
- Web Developer

### Recent graduates have gone to study

- Immunology PhD
- Plant Science PhD
- Genomic Medicine PhD

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

# 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](http://sbcs.qmul.ac.uk/undergraduate)

For further details about fieldwork, including costs, go to page 48.

### 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
- Transmission genetics
- 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)

### 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)

Plus one QMUL Model module

### Year 3

- Research methods and communication II
- Population and chromosome genetics
- Functional genomics and epigenetics

### Option modules\*

- Mammals and evolution
- Environmental microbiology
- Membrane proteins
- Behavioural ecology
- Human genetics and genomics
- Ecological and evolutionary genomics
- Parasites and infectious disease
- Neuroscience: molecules to behaviour
- Reproductive and developmental biology
- Species: Dinosaurs to DNA (includes field trip to Canada)
- Tropical ecology and conservation (includes field trip to the African savannahs)

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

# 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 Medical Genetics 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](http://sbcs.qmul.ac.uk/undergraduate)

#### 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
- Transmission genetics

#### \*Option modules

- Cell biology and developmental genetics
- Comparative and integrative physiology
- Basic immunology
- Metabolic pathways
- Microbial physiology and growth

Plus one QMUL Model module

#### Year 3

- Research methods and communication II
- Population and chromosome genetics
- Human genetics and genomics
- Functional genomics and epigenetics

#### \*Option modules

- Endocrine physiology and biochemistry
- Molecular basis of disease
- 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.



#### Entry requirements:

**A-level:** ABB, including A-level biology

**IB:** IB: 34 points overall with 6,5,5 from three Higher Level subjects including biology

**Fees:** Home/EU: £9,250, International: £19,000\* \*2018/19 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
- Editorial Assistant (medical communications)
- Clinical Research Technician

#### Recent graduates have gone to study

- Biological Sciences MSc
- Genomic Medicine MSc
- Medicine (Graduate Entry Programme) MBBS



### 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: £19,000\* \*2018/19 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.

“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 (2019)

# 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](https://sbcs.qmul.ac.uk/undergraduate)

### Year 1

- Exploring neuroscience
- The human cell
- Chromosomes and gene function
- Biomedical physiology I - exchange, movement and integration
- Biomolecules of life
- Tissue biology
- Functional neuroanatomy
- Causes and prevention of disease

### Year 2

- Biomedical physiology II - cardiovascular respiratory
- 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

### Plus one QMUL Model module

### Year 3

- Repair and regeneration in the nervous system
- Perspectives on brain disorders

### \*Option modules

- Stem cells and regenerative medicine
- Drug discovery and design
- Human genetics and genomics
- Molecular basis of disease
- Biomarkers in neuroscience
- Cognitive psychology



“Studying at Queen Mary has helped me find a PhD position in Zurich, which starts once I graduate. I love all the practical work – I’m sure all the lab experience I’ve had will serve me well for the future”

Greta Vastakaite,  
Pharmaceutical Chemistry  
MSci (2018)

#### Entry requirements:

##### MSci

**A-level:** AAB, including A-level chemistry (MSci, BSc year in industry/research) / ABB, including A-level chemistry (BSc)

**IB:** 35 points overall with 6,6,5 from three Higher Level subjects including chemistry (MSci, BSc year in industry/research) / 34 points overall with 6,5,5 from three Higher Level subjects including chemistry (BSc)

**Fees:** Home/EU: £9,250, International: £19,000\* \*2018/19 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

- GlaxoSmithKine
- Health IQ
- EY
- INC Research
- Pharmavit\*

##### Recent employment

- Research Scientist in drug development
- Science Policy Officer
- Research and Development Assistant

##### Recent graduates have gone to study

- Chemistry PhD
- Physics PhD
- Clinical Drug Development MSc

# 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: F15Z

### 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. The emphasis is on synthetic organic chemistry, while also providing a good general foundation in physical and inorganic chemistry. In addition, you will get insights into pharmacology, biochemistry and cancer chemotherapy.

Our Pharmaceutical Chemistry MSci includes a fourth year where you undertake an extended research project. 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.

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

#### 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
- Basic biochemistry

#### Year 2

- Practical chemistry
- Structure and reactivity in organic chemistry I
- Structure and Reactivity in organic chemistry II
- Solid state and inorganic chemistry
- Pharmaceutical chemistry I
- Pharmaceutical chemistry II

- Physical and quantum chemistry
- Applied spectroscopy

Plus one QMUL Model module

#### Year 3

- Advanced practical chemistry I
- Organic synthesis
- Computational chemistry
- Advanced pharmaceutical chemistry

#### Option modules:

- Topics in inorganic chemistry
- Topics in physical chemistry
- Bioorganic chemistry

All final year BSc students must complete one of the following:

- Chemistry research project
- Chemistry investigative project

# 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](https://sbcs.qmul.ac.uk/undergraduate)

#### Year 1

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

#### Year 2

- Biomedical physiology II - cardiovascular respiratory
- 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

- Grand challenges in the natural sciences
- Health and wellbeing
- Philosophy and the business of science
- Introduction to scientific programming
- Engaging the public in science
- Human genetics 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
  - Human genetics and genomics
  - 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 (2019)

#### 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: £19,000\* \*2018/19 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
- Careers in medicine and dentistry via the Graduate Entry Programme



“Being accredited by the British Psychological Society sets a strong foundation for whatever career path you decide to embark on. What also sets Psychology at Queen Mary apart is their scientific approach to the subject, which is really important for modern psychological research”

Rawan Hassan, Psychology BSc (2018)

**Entry requirements:**

**A-level:** AAB, including at least one of biology, chemistry, maths, further maths, physics or psychology

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

**Fees:** Home/EU: £9,250, International: £19,500\* \*2018/19 fees

**Course highlights**

- Accredited by the British Psychological Society\*
- Awarded one of the highest number of commendations from the British Psychological Society

**Recent Employers**

- NHS
- NHS Trust
- Burgess Autistic Institute
- African Health Policy Clinic
- The Challenge\*

**Recent employment**

- Assistant Psychologist (mental health)
- Human Resources Executive
- Trainee Clinical Research Consultant

**Recent graduates have gone to study**

- Mental Health Studies MSc
- Management and Human Resources MSc
- Clinical Criminology MSc

\*Source: Last five years Queen Mary SBSC alumni database

# Psychology

## Our degree programmes

**Psychology BSc**

UCAS code: C800



This degree will provide you with a broad understanding of psychology as a natural and experimental science and offers students a biological approach to studying psychology. You will cover the main subject areas of psychology with modules such as Cognitive Psychology, Language Acquisition and Consciousness and Causality, but these will be integrated by our biological approach, so you will also study modules such as Evolution, Fundamentals of Neurobiology and Animal Physiology. 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.

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](http://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%).

**Year 1**

- Exploring psychology I & 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
- Evolutionary psychology
- Developmental psychology
- Abnormal and clinical psychology
- Individual differences

Plus one QMUL Model module

**Year 3**

- History and philosophy of psychology

**\*Option modules**

- Behavioural ecology
- Design for human interaction
- Psychology of creativity
- Animal behaviour and cognition
- Consciousness and causality
- Mammals and evolution
- Cognitive and affective neuroscience
- Behavioural neuroscience methods
- Evolution of the human mind
- Counselling psychology
- Behavioural epigenetics
- Language and mind
- Nature, nurture and mental health
- Health psychology

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

# 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](https://sbcs.qmul.ac.uk/undergraduate)

\*For further details about fieldwork, including costs, go to page 48.

#### 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

#### \*Option modules

- Genes and bioinformatics
- Cell biology and developmental genetics
- Evolutionary genetics
- Marine and animal diversity (includes field trip to Millport, Scotland)
- Transmissions genetics
- Microbial physiology and growth
- Ecological interactions I and II (includes field trip to Croatia)

Plus one QMUL Model module

#### Year 3

- Research methods and communication II

#### \*Option modules

- Mammals and evolution
- Environmental microbiology
- Behavioural ecology
- Endocrine physiology and biochemistry
- Ecological and evolutionary genomics
- 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)
- Tropical ecology and conservation (includes field trip to the African savannahs)
- Climate change and conservation challenges
- Animal behaviour and cognition

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

Zoology BSc student Patrick Hennessey on a recent field trip to Canada. Photo courtesy of Dr Beth Clare

#### 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: £19,000\* \*2018/19 fees

#### Course highlights

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

#### Recent employment

- Veterinary Nurse
- Digital Delivery Assistant
- Science Teacher

#### Recent graduates have gone to study

- Evolutionary Biology PhD
- Ecology, Evolution and Conservation MSc
- Ecology and Evolutionary Biology MSc

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

# 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, whilst the home of our chemists, the Joseph Priestley building, recently benefited from a £500k investment and the labs are currently being refurbished. 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, the most prominent of which is 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.

“The campus offers plenty of facilities, including a gym and a bookshop, which are really handy. The department’s facilities have been recently refurbished, so now there is an amazing new lab”

Martina Lattore, Biology BSc (2017)



# 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 24-45 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 2017/18). 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](http://sbcs.qmul.ac.uk)



Students investigating predator-prey interactions on a field trip in Somerset. Photo courtesy of Dr David Hone



Students prospecting for dinosaur fossils in Alberta, Canada Photo courtesy of Dr Beth Clare



Students visiting Kruger National Park on our South Africa field trip. 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/](http://www.qmul.ac.uk/studentlife/social/london/)



“In London, it feels like you live in the centre of it all and are able to take part. When applying for internships, as I did in my final year, it feels like you can actually do whatever you like and achieve your goals, as there are so many options”

Jella Reblin, Psychology BSc (2016)





## 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.

### QMUL 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](http://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](http://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](http://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](https://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](https://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](https://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](https://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/](https://qmul.ac.uk/undergraduate/feesandfunding/tuitionfees/)

For information on field trip costs which are not included in your tuition fees, please see page 48 and [sbcs.qmul.ac.uk](https://sbcs.qmul.ac.uk)

## Funding

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

The School of Biological and Chemical Sciences has a maximum of 25 scholarships available to Home/EU students. Each scholarship consists of an annual £3,000 bursary and will be awarded on the basis of academic excellence. Scholarships can be continued into the 2nd and 3rd year on the

basis of good academic performance. For more information on these and all the bursaries on offer at Queen Mary, please see: [qmul.ac.uk/undergraduate/feesandfunding/bursaries/](https://qmul.ac.uk/undergraduate/feesandfunding/bursaries/)

The Queen Mary International Science and Engineering Excellence Awards 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 bursaries on offer at Queen Mary, please see: [qmul.ac.uk/international/international-students/feesfinance/](https://qmul.ac.uk/international/international-students/feesfinance/)

## 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](https://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.

All of our accommodation is in self-catered houses, flats and maisonettes. Most of our students can apply for accommodation in our residences on the Mile End Campus on our Mile End campus\*. To find out more visit: [residences.qmul.ac.uk/college/qmaccommodation/](https://residences.qmul.ac.uk/college/qmaccommodation/)

## Living off campus

Renting private accommodation off-campus is a popular choice for many students. The vast majority of second and third-year students - and even some first-years - prefer the independent lifestyle offered by sharing flats or houses with friends. We provide a range of advice and information to help you to find a convenient and affordable place to stay, including an online listing of privately owned accommodation available for rent. Much of this accommodation is in east or north-east London, within easy walking or commuting distance of Mile End.

## Applying for our accommodation

Once you accept your place to study here, full details on how to apply for halls will be automatically sent to you. Queen Mary housing is very popular and we suggest you apply as early as possible. For housing deadlines and eligibility, visit: [residences.qmul.ac.uk/college/application](https://residences.qmul.ac.uk/college/application)

## Single sex housing

We can offer single sex flats in residences that share bathroom facilities.

## What is my accommodation likely to cost?

Here are some guideline housing prices – the prices quoted are for the academic year 2018-19. Residential fees are payable termly in advance:

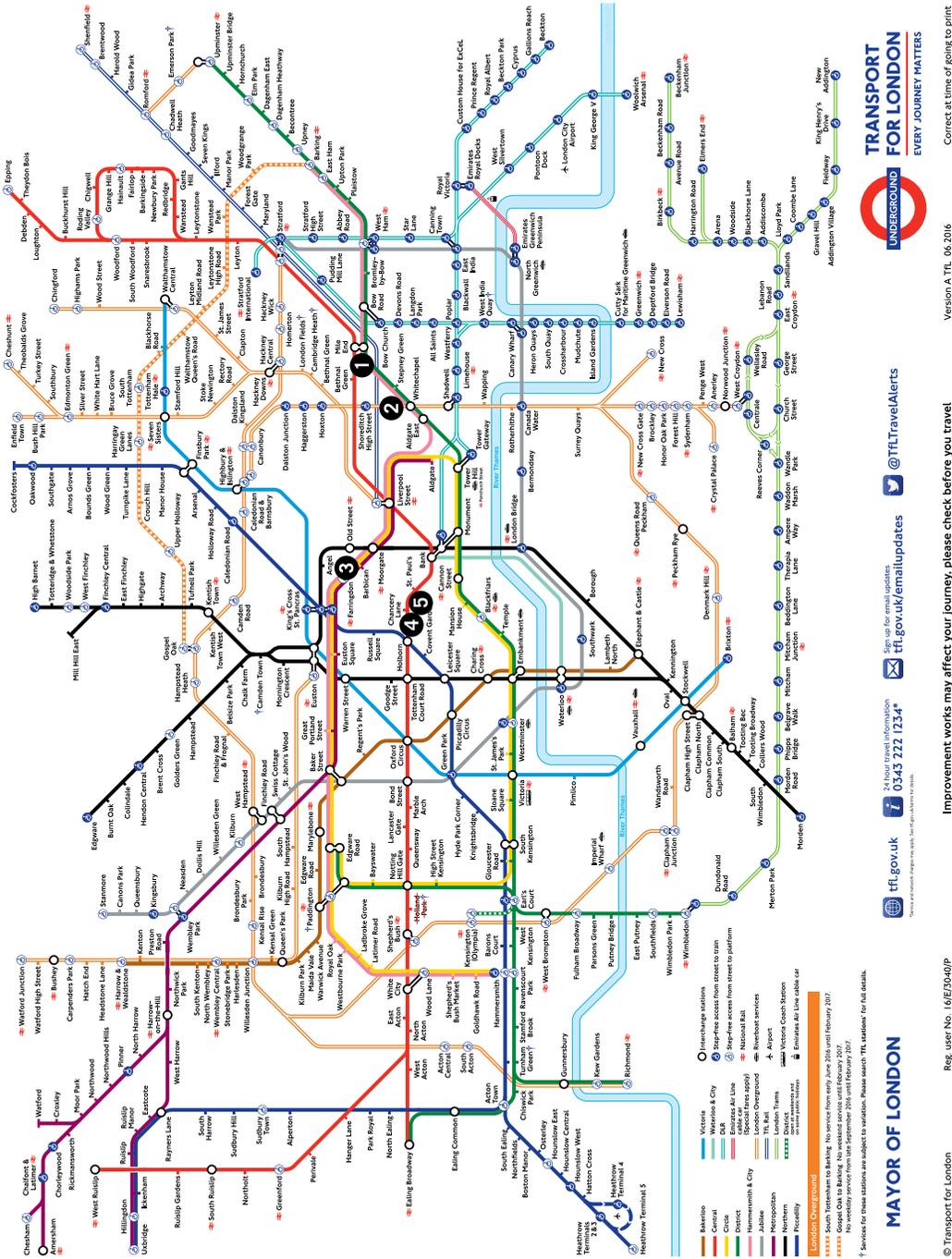
- Queen Mary residences – rents for single rooms range from £129 (non-ensuite) - £177 (ensuite) per week, including all utility costs, insurance and Wi-Fi. Current prices can be found at: [residences.qmul.ac.uk/college/fees](https://residences.qmul.ac.uk/college/fees)
- Privately rented accommodation – student rents in the local area in shared flats and houses typically range from £120-£160 per week. There are also a number of privately run student halls in the area, rents in these purpose built developments reflect the very high standards (most being self-contained studios) and range from between £215 - £370 per week.

## Alternative housing options

We can provide specialist advice on a range of alternative housing including: renting a local room or flat, a room in a privately built hall of residence or choosing a homestay or short-stay option (which provides greater flexibility). For further information, guidance and prices, visit: [residences.qmul.ac.uk/alternative](https://residences.qmul.ac.uk/alternative)

For all accommodation queries, contact us on:  
Tel: +44 (0)20 7882 6474  
email: [residences@qmul.ac.uk](mailto:residences@qmul.ac.uk)

# London tube map



Correct at time of going to print

Version A.TL 06.2016

Improvement works may affect your journey, please check before you travel

Reg. user No. 16/EZ304/P

© Transport for London

- 1 Mile end campus
- 2 Whitechapel campus
- 3 Charterhouse Square campus
- 4 Lincoln's Inn Fields campus
- 5 West Smithfield campus

# Mile End Campus

For more detailed campus information, see: [qmul.ac.uk/about/howtofindus](http://qmul.ac.uk/about/howtofindus)

Educational/Research	Residential	Facilities	Information
ArtsOne	37	Albert Stern Cottages	3
ArtsTwo	35	Albert Stern House	1
Arts Research Centre	39	Beaumont Court	53
Bancroft Building	31	Chapman House	43
Bancroft Road Teaching Rooms	10	Chesney House	45
Peter Landin Building (Computer Science)	6	Creed Court	57
Engineering Building	15	France House	55
G.E. Fogg Building	13	Feilden House	46
Geography	26	Hatton House	40
Graduate Centre	18	Ifor Evans Place	2
Informatics Teaching Laboratories	5	Lindop House	21
Joseph Priestley Building	41	Lodge House	50
Library	32	Lynden House	59
Law	36	Maurice Court	58
Lock-keeper's Cottage	42	Maynard House	44
Occupational Health and Safety Directorate	12	Pooley House	60
People's Palace/Great Hall	16	Selincourt House	51
Queens' Building	19	Varey House	49
Scape Building	64		
Temporary Building	61		
Building construction site	14		
Building closed for major refurbishment	4		
		Advice and Counselling Service	27
		Bookshop	22
		Canalside	63
		Careers Centre	19
		Clock Tower	20
		CopyShop	56
		The Curve	47
		Disability and Dyslexia Service	31
		Drapers' Bar and Kitchen	8
		Ground Cafe	33
		The Hive	24
		Housing Hub	48
		IT Services	19
		Mucci's	29
		Occupational Health Service/ Student Health Service	28
		Octagon	19a
		Portering and Postal Services	17
		Qmotion Health and Fitness Centre	7
		Sports Hall	7
		Santander Bank	62
		Security	38/54
		St Benet's Chaplaincy	23
		Student Enquiry Centre	19
		Students' Union Hub	34
		Union Shop	9
		Village Shop	52
		Westfield Nursery	11

- Visitors who require further information or assistance should please go to the main reception in the Queens' Building.
- The smoking of cigarettes or tobacco products are **only** permitted at designated smoking areas / shelters indicated on this map.
  - 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**
- Library/bookshop
  - Fitness centre
  - Refreshment: Bar/Eatery/Coffee place
  - Staff car park
  - Bicycle parking
  - Bicycle lockers
  - Cash machine
  - Smoking area / shelter



# Whitechapel Campus

For more detailed campus information, see: [qmul.ac.uk/about/howtofindus](http://qmul.ac.uk/about/howtofindus)

Educational/Research	Residential	Facilities	Information
<b>Hospital Buildings</b>	Floyer House <b>10</b>	Beigel Bunnies (R) <b>1</b>	Smoking is prohibited on campus.
Royal London Hospital <b>A</b>	Varden Street <b>11</b>	Library (L) <b>2</b>	Electronic cigarettes permitted on College Campus outside spaces <b>only</b> .
Pathology and Pharmacy Building <b>B</b>		Nucleus (R) <b>6</b>	These premises are alarmed and monitored by CCTV; please call Security on +44 (0)20 7882 5000 for more information.
The Royal London Dental Hospital <b>C</b>		Post Room <b>4</b>	
<b>College Buildings</b>		Security <b>1</b>	
Garrod Building <b>1</b>		Students' Union Griff Inn (R) <b>3</b>	
Library <b>2</b>			
Students' Union <b>3</b>			
Abernethy Building <b>4</b>			
Queen Mary Innovation Centre <b>5</b>			
Blizard Building and Centre of the Cell <b>6</b>			
Wingate Building <b>7</b>			
Yvonne Carter Building <b>8</b>			
64 Turner Street <b>9</b>			

### Key

(L) Library/bookshop

(R) Refreshment: Bar/Eatery/Coffee place

(P) Bicycle parking



# Charterhouse Square Campus

For more detailed campus information, see: [qmul.ac.uk/about/howtofindus](http://qmul.ac.uk/about/howtofindus)

Educational/Research	Residential	Facilities	Information
John Vane Science Centre <b>1</b>	Dawson Hall <b>4</b>	The Shield (R) <b>4</b>	Smoking is prohibited on campus.
Wolfson Institute of Preventative Medicine <b>2</b>		Gym (L) <b>4</b>	Electronic cigarettes permitted on outside spaces <b>only</b> .
The William Harvey Heart Centre <b>3</b>		Post Room <b>1</b>	These premises are alarmed and monitored by CCTV; please call Security on +44 (0)20 7882 5000 for more information.
Dawson Hall <b>4</b>		Security <b>4</b>	
Joseph Rotblat Building <b>5</b>			
Old Anatomy Building <b>6</b>			
Dean Rees House <b>7</b>			
Lodge House <b>8</b>			

### Key

(L) Fitness centre

(R) Refreshment: Bar/Coffee place

(P) Staff car park

(P) 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](https://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](https://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](https://qmul.ac.uk/undergraduate/coursefinder)

Read our terms and conditions in full at:

[qmul.ac.uk/prospective/termsandconditions](https://qmul.ac.uk/prospective/termsandconditions)

Accredited by the



## Contact

Queen Mary University of London, Mile End Road,  
London E1 4NS [www.qmul.ac.uk](https://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](https://jdestevao.com)) Ray Crundwell Layton Thompson ([laytonthompson.com](https://laytonthompson.com)) ([raycrundwell.com](https://raycrundwell.com)) and Jonathan Cole ([www.JonathanColePhotography.com](https://www.JonathanColePhotography.com))

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