Welcome to Bart’s & The London School of Medicine & Dentistry (SMD), to the School of Biological & Chemical Sciences (SBCS), and specifically to the Pharmacology & Innovative Therapeutics BSc degree programme (B211).

Pharmacology is the study of how drugs and medicines work at the cellular and sub-cellular level to produce their useful (and sometimes harmful) effects in man. Therapeutics is the use of medicines to treat or prevent illness. In this full time, 3-year Pharmacology and Innovative Therapeutics BSc degree, we offer a curriculum which will give you a broad understanding of drug action through to the processes involved in the eventual translation of basic science into new medicines.

In Year 1, you will gain a solid foundation in all key areas of biomedical sciences to help understand how drugs work at the molecular and functional levels. You will study topics such as the human cell, chromosomes and gene functions, tissue biology, biomolecules of life and biomedical physiology. The two programme-specific modules in Year 1 (introduction to pharmacology and research skills for pharmacologists) have been designed to introduce you to the principles and concepts of pharmacology and to provide you with a set of key generic skills including practical, computer literacy and data handling skills to undertake further study into Pharmacology.

In Year 2, you will study topics such as human molecular biology and essential biochemistry of life. You will gain an in-depth knowledge into pharmacology and therapeutics through programme-specific modules that include drug target identification, clinical pharmacology and assessment of drug safety and the business of pharmacology. The final year of the programme consists of a research-oriented project and a number of specialist topics in pharmacology such as drug design for pharmacologists, translational pharmacology and Innovative Therapeutics, classic papers and current topics in pharmacology and clinical trials and regulatory affairs).
The pharmacology-specific modules are taught by world-leading experts at the William Harvey Research Institute (WHRI), [https://www.qmul.ac.uk/whri/](https://www.qmul.ac.uk/whri/) one of Europe’s largest Pharmacological Institutes. The WHRI was awarded the ‘UK Pharmacology on the Map’ award in 2015 for its outstanding contribution to the discovery and development of medicines. Students on the programme will gain free membership of the ‘British Pharmacological Society [https://www.bps.ac.uk/](https://www.bps.ac.uk/) which offers a number of Education-related prizes, awards and grants as well as providing careers advise.

This degree programme offers excellent training for graduates to pursue careers in a wide-range of medically-related fields, within academia, and in both the public-sector and private sectors.

In closing, may I reiterate my welcome to QMUL, to SMD, to SBCS, to WHRI and specifically to the Pharmacology & Innovative Therapeutics BSc degree programme. I hope that you find this programme handbook useful and that, over the next 3 years, you find your undergraduate degree to be as enjoyable as it is educational. I hope that you will make the most of the opportunities for personal and professional development offered by the wide range of compulsory and elective modules. These modules build on the breadth of expertise offered by academic colleagues at the WHRI as well as other institutes within the Bart’s & the London School of Medicine & Dentistry and SBCS. All of the staff involved in your degree wish you good luck with your studies and look forward to supporting your personal and career aspirations over the course of your degree and, beyond that, when you graduate and become an alumnus of QMUL.

Dr Sadani Cooray

Programme Director, Pharmacology & Innovative Therapeutics BSc [B211]

September 2018
(2) KEY NAMES / CONTACTS

<table>
<thead>
<tr>
<th>ROLE</th>
<th>NAME</th>
<th>EMAIL ADDRESS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Director of Teaching &amp; Learning (DTL) [Biomedical Sciences]</td>
<td>Dr Mark Preece</td>
<td><a href="mailto:m.preece@qmul.ac.uk">m.preece@qmul.ac.uk</a></td>
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<td>Programme Director:</td>
<td>Dr Sadani Cooray</td>
<td><a href="mailto:s.n.cooray@qmul.ac.uk">s.n.cooray@qmul.ac.uk</a></td>
</tr>
<tr>
<td>Programme Tutors:</td>
<td>Dr Richard Grose</td>
<td><a href="mailto:r.grose@qmul.ac.uk">r.grose@qmul.ac.uk</a></td>
</tr>
<tr>
<td></td>
<td>Prof Lucinda Hall</td>
<td><a href="mailto:l.hall@qmul.ac.uk">l.hall@qmul.ac.uk</a></td>
</tr>
<tr>
<td>Programme Administrator (based in WHRI)</td>
<td>Miss Bijal Tailor</td>
<td><a href="mailto:b.tailor@qmul.ac.uk">b.tailor@qmul.ac.uk</a></td>
</tr>
<tr>
<td>Academic Advisor</td>
<td>You will be advised who your academic advisor is during induction week</td>
<td></td>
</tr>
<tr>
<td>Student Support Officer (based in Mile End, SBCS)</td>
<td>Ms Shaheda Batha</td>
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<tr>
<td>Head of Undergraduate Science Teaching, SMD</td>
<td>Prof Lucinda Hall</td>
<td><a href="mailto:l.hall@qmul.ac.uk">l.hall@qmul.ac.uk</a></td>
</tr>
<tr>
<td>Director of Taught Programmes (DTP)</td>
<td>Dr Chris Bray</td>
<td><a href="mailto:c.bray@qmul.ac.uk">c.bray@qmul.ac.uk</a></td>
</tr>
</tbody>
</table>

(3) PROGRAMME AIMS

The overall vision and aim of the Pharmacology and Innovative Therapeutics BSc degree is to support you in developing a multidimensional understanding of drug discovery right the way through from scientific advances in basic research to the processes involved in the development of new medicines, preclinical development tests as well as clinical trials, marketing authorisation medicines regulators, post-authorisation surveillance, drug utilisation and medicines access. This will be delivered through collaborative participation of academia, biotech companies and the pharmaceutical industry.

You will gain a solid foundation in all key areas of biomedical sciences and an in-depth knowledge and understanding into the principles of therapeutics, drug design, target identification and validation, along with an understanding into the many processes involved in drug development for therapeutic use.
The commercial collaborations will expose you to the novel breakthrough therapies in areas including vaccines, oncology, cardiovascular, metabolic diseases, pain and neuroscience, inflammation and immunology as well as rare disorders. You will also gain an awareness into issues faced by stakeholders including the pharmaceutical industry, healthcare providers, patients, and regulators, for example, drug shortages, targeted/personalised drugs, use of biomarkers, clinical trial design, drug safety, risk/benefit assessments, collaboration between patients, academia, industry and the regulatory community, international collaborations, relevant legislation, policy and bioethics, novel tools for scientific/clinical communication and sustainability of innovation/financial models for product development/pricing, and marketing authorisation requirements.

The programme will address skills requirements for:

- Progression to medical and dental degree courses and professions allied to medicine.
- Employment in hospital biomedical science laboratories.
- Academic and clinical research.
- Employment in biotechnology, pharmaceutical, and microbiology based industries.

More broadly, the BSc degree also aims to:

- Provide a rational, flexibly structured and coherent programme of study which is relevant to the needs of employers, facilitates your professional development and lays the foundations for a successful career which is to the benefit of the economy and society;
- Provide a sound knowledge base in the fields studied and develop key transferable skills in the areas of communication, numeracy, information technology, working with others, problem solving, time and task management;
- Foster the development of an enquiring, open-minded and creative attitude, tempered with scientific discipline and social awareness, which encourages lifelong self-directed learning.
## (4) WHAT WILL YOU BE EXPECTED TO ACHIEVE?

### Academic Content
On successful completion of your BSc programme, you are expected to:
1. Demonstrate knowledge of a broad range of topics including biochemistry, genetics, cell biology and human molecular biology to help facilitate understanding of how drugs work at molecular and functional levels.
2. Demonstrate knowledge and understanding of pharmacological facts, terms, methods, concepts, principles and relationships and to appreciate their importance.
3. Demonstrate knowledge into innovative breakthrough therapies and understanding of the processes involved in translation of scientific discoveries through basic research into new medicines including knowledge in preclinical development tests, clinical trial design and governance and regulatory approval.
4. Demonstrate awareness into issues faced by the multiple stakeholders in the innovative drug development process.
5. Apply cutting edge knowledge and acquired scientific skills as a precursor to research in pharmacology, a career in the pharmaceutical industry, work within a clinical healthcare environment or at a government regulatory body.

### Disciplinary Skills
On successful completion of your BSc programme, you will be able to:
1. Apply pharmacology knowledge and principles together with problem solving skills in a wide range of theoretical and practical situations.
2. Conduct practical work with good laboratory practice efficiently and with due regard for safety to acquire sound scientific data.
3. Critically evaluate scientific data including the methodology by which they were obtained, statistical analysis used and evaluate and interpret the results of controlled experiments.
4. Retrieve, filter and collate pharmacological data from a variety of information sources.
5. Prepare scientific/technical reports.

### Attributes
On successful completion of your BSc programme, you will be able to:
1. Communicate effectively by written and/or verbal means.
2. Demonstrate capacity for independent learning, and to work independently.
3. Participate constructively as a member of a group/team, with skills to influence, negotiate and lead.
4. Assess the relevance, importance and reliability of the ideas of others and of different sources of information.
5. Use basic software programs for the manipulation and analysis of quantitative data.
6. Articulate the role and impact of science in society, including the global perspective.
7. Use information for evidence-based decision-making and creative thinking.

## (5) HOW WILL YOU LEARN?

You will acquire knowledge and develop your understanding mainly through lectures and directed independent study (see Section 6). Your understanding will be reinforced through
a combination of tutorials, workshops, problem-based learning classes, laboratory classes and e-learning (depending upon the modules which you study), including regular feedback on submitted work. Additional learning support is provided through Queen Mary’s online learning environment, QMplus, and the facilities of the QMUL Student PC Service.

**Practical skills** will be taught as part of organised practical classes during the early stages of the programme. Each **practical class** is likely to be repeated two or more times in the same week. You will be allocated (randomly) to a specific practical group to attend the practical class on a given date/time. If you are unable to attend on the assigned date/time (e.g. if you are allocated to a Wednesday afternoon, but have sports commitments, or if you are allocated to a Friday afternoon but need to attend jumah or to get home before shabbat), you are required to (a) **negotiate a swap** with a fellow student from a different group and then (b) **email the Module Organiser** with details of that swap (confirming who you will be swapping with). If you are unable to negotiate a swap for an assessed practical class, you may be able to submit a claim for **extenuating circumstances** provided the reason for non-attendance is (i) unforeseeable and (ii) beyond your control, and you can provide documentary evidence to support your application.

**Workshops** will reinforce knowledge acquired in lectures and provide opportunities for application of such knowledge to the solution of real problems. Advanced practical skills and specialised analytical skills are then developed during the **project component** of the third year. The third year also includes **critical analysis** through project development and **tutorial led journal clubs** and **discussion forums**.

Queen Mary's **graduate attributes** are developed in a progressive fashion, but most notably in modules such as **BMD151 Causes and prevention of Disease** and **BMD271 Business of Pharmacology**. The **project module** provides further opportunities for the development of **transferable skills** and other aspects of these attributes.

**WHAT IS “INDEPENDENT STUDY”?”**

For **every hour of contact** with academic staff, you will be expected to devote **between 3 and 5 hours** to independent study. This may include **staff-directed** exercises (e.g. completion of coursework assignments) or **self-directed** independent study. There are various forms of independent study which include:

- **preparation** in advance of a lecture/tutorial/workshop/practical class
- **consolidation** of material introduced by the lecturer/tutor (e.g. writing up your lecture notes)
- **elaboration / extension** (e.g. reading around the topic after the lecture)
- **application** (i.e. reinforcing your understanding of a topic by applying any principles introduced in a lecture/tutorial/practical class to a new scenario)

You might be expecting to prepare and consolidate, since these activities most closely resemble the “homework” for Secondary/Further Education. However, to succeed in your
undergraduate degree at university, you will have to make time to elaborate/extend and apply new knowledge in order to develop the depth of understanding required if you are to be recommended for first or upper second class honours.

(7) HOW WILL YOU BE ASSESSED?

For each module that comprises your pharmacology degree, your knowledge and understanding will generally be tested through a combination of assessed coursework and unseen written examinations. For the majority of modules, the coursework:exam weighting will be as follows:

<table>
<thead>
<tr>
<th>Year</th>
<th>Coursework</th>
<th>Exam</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year 1</td>
<td>25%</td>
<td>75%</td>
</tr>
<tr>
<td>Year 2</td>
<td>25%</td>
<td>75%</td>
</tr>
<tr>
<td>Year 3</td>
<td>20%</td>
<td>80%</td>
</tr>
</tbody>
</table>

For some modules, a higher proportion of marks will be derived from the coursework, and in extreme cases (e.g. the final year research projects), the module will be assessed by coursework only with no written exam. (Please check the module details on QMPlus to confirm the exact coursework:exam weighting for each module.)

The exact nature of the coursework varies from module to module and may include work in the form of laboratory experiment write-ups, essays and/or problem sheets. The coursework mark may also include a contribution from computer-based assessments and in-course tests. Specific modules (if taken) include assessed oral examinations, oral presentations and extended reports/dissertations.

Transferable skills are developed in a contextual manner throughout the teaching and learning programme, and are indirectly assessed as part of the normal assessment processes for the programme. For example, the assessment of the projects includes consideration of data-retrieval skills, report-writing skills and presentational skills.

Practical skills are assessed through in-class observation and through written laboratory reports, which often include attention to quantitative accuracy. The assessment of the final year practical research project also addresses the majority of the professional disciplinary skills that students of this programme are expected to acquire.

The weighting of marks available for a given component should be reflected in the amount of time that you will need to commit to working on each element. For example, where 25% of the module marks are available for coursework, you should expect to devote 25% of 150 hours (i.e. approximately 37 hours) to completing the coursework elements to the best of your ability. The remaining 75% of 150 hours (i.e. approximately 113 hours) should be devoted to attending lectures/tutorials and independent study to ensure you understand the module content well enough to achieve a high grade in the module exam. The default exam durations and structures also differ between years, as follows:
<table>
<thead>
<tr>
<th>Year</th>
<th>Default exam duration</th>
<th>Number of sections</th>
<th>Section A</th>
<th>Section B</th>
<th>Section C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year 1</td>
<td>1.5 hours</td>
<td>2</td>
<td>Multiple Choice Questions (50% of mark)</td>
<td>Short Answer Questions (choice of 1 from 2) (50% of mark)</td>
<td>N/A</td>
</tr>
<tr>
<td>Year 2</td>
<td>2.5 hours</td>
<td>3</td>
<td>Multiple Choice Questions (30% of mark)</td>
<td>Short Answer Questions (choice of 1 from 2) (30% of mark)</td>
<td>Essay (choice of 1 from 3) (40% of mark)</td>
</tr>
<tr>
<td>Year 3</td>
<td>3 hours</td>
<td>3</td>
<td>Multiple Choice Questions (34% of mark)</td>
<td>Essay (choice of 1 from 3) (33% of mark)</td>
<td>Essay (choice of 1 from 3) (33% of mark)</td>
</tr>
</tbody>
</table>

To progress beyond Year 1 of the degree, you must pass at least 6 modules x 15 credits (i.e. 90 credits in total). To progress beyond Year 2, you must pass at least 195 credits cumulatively from Year 1 and 2 modules. To graduate with a BSc degree, you must pass at least 315 credits across your 3 year programme. (An alternative way of considering these criteria is that you can fail no more than 3 x 15 credit modules across 3 years.)

(8) **HOW IS THE PROGRAMME STRUCTURED?**

In the programme outline provided on the following pages, **compulsory** modules are denoted in standard text whereas **elective** modules are denoted in *italicised* text. The credit value of each module is denoted in parentheses. In each academic year, you must study **120 credits** (such that you study a total of 360 credits over the course of your 3 year BSc). It is **strongly recommended** that where elective modules are available, you should select a total of **60 credits** to study in **Semester A** and a total of **60 credits** in **Semester B**. (If you wish to study more credits in one or other Semester, you should discuss this with your Academic Advisor and then with the Programme Director, Dr Sadani Cooray, before making your pre-selection. You may not enrol for more than 75 credits in any given semester.)

To assist your choice of electives most appropriate to your interests and career aspirations, we want you to have every opportunity to research the elective modules available to you prior to **module pre-selection** (which happens in the month of **May**). We will provide you with **published information** (or videocasts) that outline the module content and in Semester B, we will also organise a “**Module Elective Fair**” at which you can meet with Module Organisers and senior students who have studied each module to ask any questions about elective modules that you might wish to take in the next academic year.
Please note that some elective modules have to operate **caps** on the maximum number of students that the module can accommodate, *e.g.* field-based modules where a finite number of students can be accommodated in the field station. In this case, acceptance on to a module with capped numbers may be contingent on your academic performance prior to the point of module selection (typically your Year 1 academic performance).

The modules listed in the programme outline which follows are **indicative** only. Every effort will be made to run all of the modules advertised in the degree programme outline. However, to offer you the best educational experience while at QMUL, in any one year, a module advertised on the following pages may not be offered if:

(a) the numbers of students eligible to select a particular module (either too many or too few) would provide you with a compromised student experience;

(b) academic staff with the requisite experience are unavailable to teach a module (*e.g.* through ill health, injury or retirement)

Likewise, dependent on staff availability and appropriate quality assurance, we may be able to add new modules to subsequent years of your degree programme and improve even further your choice of elective modules.

<table>
<thead>
<tr>
<th>Year 1</th>
<th>SEMESTER A</th>
<th>SEMESTER B</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>BMD111</strong> Chromosomes &amp; Gene Functions (15)</td>
<td><strong>BMD121</strong> Biomedical Physiology I (15)</td>
</tr>
<tr>
<td></td>
<td><strong>BMD115</strong> The Human Cell (15)</td>
<td><strong>BMD123</strong> Biomolecules of Life (15)</td>
</tr>
<tr>
<td></td>
<td><strong>BMD151</strong> Causes and Prevention of Disease (15)</td>
<td><strong>BMD171</strong> Introduction to Pharmacology (15)</td>
</tr>
<tr>
<td></td>
<td><strong>BMD175</strong> Research Skills for Pharmacologists (15)</td>
<td><strong>BMD181</strong> Tissue Biology (15)</td>
</tr>
<tr>
<td></td>
<td><strong>BMD227</strong> Human Genetic Disorders (15)</td>
<td><strong>BMD269</strong> Infection, Immunology &amp; Inflammation (15)</td>
</tr>
<tr>
<td></td>
<td><strong>BMD261</strong> Cellular &amp; Molecular Neuroscience (15)</td>
<td><strong>BMD271</strong> The Business of Pharmacology (15)</td>
</tr>
<tr>
<td>Year 2</td>
<td><strong>BMD221</strong> Biomedical Physiology II (15)</td>
<td><strong>BMD273</strong> Clinical Pharmacology &amp; Assessment of Drug Safety (15)</td>
</tr>
<tr>
<td></td>
<td><strong>BMD223</strong> Essential Biochemistry for Human Life (15)</td>
<td><strong>BIO263</strong> Membrane &amp; Cellular Biochemistry (15)</td>
</tr>
<tr>
<td></td>
<td><strong>BMD275</strong> Drug Target Identification (15)</td>
<td><strong>BMD2223</strong> Essential Biochemistry for Human Life (15)</td>
</tr>
<tr>
<td></td>
<td><strong>BIO227</strong> Human Genetic Disorders (15)</td>
<td><strong>BMD359</strong> Drug Design for Pharmacologists (15)</td>
</tr>
<tr>
<td></td>
<td><strong>BMD351</strong> Advanced Immunology (15)</td>
<td><strong>BMD357</strong> Clinical Trials &amp; Regulatory Affairs (15)</td>
</tr>
<tr>
<td>Year 3</td>
<td><strong>BMD375</strong> Translational Pharmacology &amp; Innovative Therapeutics (15)</td>
<td><strong>BMD365</strong> Biomarkers in Neuroscience (15)</td>
</tr>
<tr>
<td></td>
<td><strong>BMD377</strong> Classic Papers &amp; Current Topics in Pharmacology (15)</td>
<td><strong>BMD381</strong> Cancer Biology (15)</td>
</tr>
<tr>
<td></td>
<td><strong>BIO323</strong> Human Genetics &amp; Genomics (15)</td>
<td><strong>BMD383</strong> Molecular Basis of Personalised Medicine (15)</td>
</tr>
<tr>
<td></td>
<td><strong>BMD353</strong> Stem Cells &amp; Regenerative Medicine (15)</td>
<td><strong>BMD365</strong> Biomarkers in Neuroscience (15)</td>
</tr>
<tr>
<td></td>
<td><strong>BMD359</strong> Drug Design for Pharmacologists (15)</td>
<td><strong>BMD381</strong> Cancer Biology (15)</td>
</tr>
<tr>
<td></td>
<td><strong>BMD378</strong> Clinical Trials &amp; Regulatory Affairs (15)</td>
<td><strong>BMD383</strong> Molecular Basis of Personalised Medicine (15)</td>
</tr>
</tbody>
</table>

9 | Page
BIO603  Project Skills in the Life Sciences (30)  OR
BMD670  Research Project in Pharmacology (30)

**Year 1:** All Year 1 modules are compulsory to ensure that all students on the degree programme have the requisite understanding to prepare them for Years 2 and 3 of the degree programme.

**Year 2:** Six of the Year 2 modules (90 credits) are compulsory: BMD211 (Human Molecular Biology), BMD221 (Biomedical Physiology II), BMD269 (Infection, Immunology & Inflammation), BMD271 (The Business of Pharmacology), BMD273 (Clinical Pharmacology & Assessment of Drug Safety) and BMD275 (Drug Target Identification). This will leave you with a choice of 2 elective modules (30 credits) from 5 potential electives.

If you commenced your BSc programme in (or after) September 2017, your choice of elective modules for Year 2 will be required to include a **QM Model module** of either 10 or 15 credits in value. *(In the event that you choose a 10 credit QM Model module, you will need to select an additional 5 credit elective module to take your total credits studied in Year 2 up to the required annual total of 120 credits.)*

**Year 3:** There are 4 compulsory, 15 credit Year 3 modules: BMD359 (Drug Design for Pharmacologists), BMD375 (Translational Pharmacology & Innovative Therapeutics), BMD377 (Classic Papers & Current Topics in Pharmacology) and BMD378 (Clinical Trials & Regulatory Affairs). In addition, you must select one of the two 30 credit modules: either BMD670 (Research Project in Pharmacology) or BIO603 (Project Skills in the Life Sciences). In order to have a free choice between these two 30 credit options, you will need to perform well in Year 1 of your degree, typically scoring in excess of 65% (if not 70%) in each of your Year 1 modules. If you are not above the 70th centile for Year 1 average marks, you will have to study BIO603 in Year 3. This leaves you with a choice of 2 elective modules (30 credits) from 6 potential electives.

### (9) HOW DO WE LISTEN AND ACT ON YOUR FEEDBACK?

You are strongly encouraged to provide informal feedback to Module Organisers and/or to the Programme Director where you can see a way that your teaching could be significantly improved or you have cause for complaint, or you wish to highlight a good or particularly effective feature of a module. If you feel uncomfortable approaching a Module Organiser and/or Programme Director, you can also make any suggestions/raise any concerns by email to: sbcs-studentvoice@qmul.ac.uk. This email address is monitored daily by several colleagues so you can reasonably expect a response within 3 working days if you use the “student voice” email account. If you have a complaint, make it promptly once identified so that, if possible, it may be addressed.
The Student-Staff Liaison Committee (SSLC), Chaired by the Director for Student Experience, Dr Dennis, provides a formal means of communication and discussion between the School and its students. The committee consists of elected student representatives from each year of each SBCS and SMD undergraduate degree programme, together with appropriate representation from staff within both SBCS and SMD. SSLC is designed to respond to the needs of students, as well as act as a forum for discussing programme and module developments. The SSLC meets regularly throughout the year.

The SMD Science & Undergraduate Teaching & Learning (SUTL) Committee advises the Head of Undergraduate Science Education for SMD, Professor Hall, on all matters relating to the delivery of taught programmes at school level, including monitoring the application of relevant QM policies and reviewing proposals for module and programme approval and amendment before submission to Taught Programmes Board (TPB). The SBCS Teaching & Learning Committee (TLC) performs equivalent roles, advising the Director of Taught Programmes (DTP) in SBCS, Dr Bray who works very closely with Professor Hall and with the Programme Director, Dr Cooray, to ensure that all student concerns are identified, shared, and acted upon, as appropriate. Student views are incorporated into the work of both SUTL and TLC in a number of ways, such as through consideration of student surveys and input from the SSLC.

All schools/institutes operate an Annual Programme Review (APR) of their taught undergraduate and postgraduate provision. APR is a continuous process of reflection and action planning which is owned by those responsible for programme delivery; the main document of reference for this process is the Taught Programmes Action Plan (TPAP) which is the summary of the school/institute's work throughout the year to monitor academic standards and to improve the student experience. Students’ views are considered in this process through analysis of the National Student Survey (NSS), Queen Mary Student Survey (QMSS) and module evaluations.

**10) ACADEMIC SUPPORT**

You will be provided with a personal tutor, referred to as an "Academic Advisor, who will serve as your main point of contact for advice regarding academic matters and for assistance with pastoral concerns, throughout your whole programme. Advisors in SMD no longer operate the system of “office hours” since all advisees may have very different patterns of availability dependent on their choice of elective modules. Instead you can schedule an appointment to meet with your Advisor via email. Moreover, if and when your Advisor is unavailable or cannot help with a specific problem, SMD and SBCS have several experienced Programme Tutors and a Student Support Officer plus Student Support Assistant who can address any concerns that you might have. (The Head of Undergraduate Science Education and the DTP are always happy to schedule meetings with individual students and/or small groups of students, but only where they have not been able to
resolve issues with their Academic Advisors/Programme Tutors or the Student Support Officer/Assistant.)

The Schools also operate a Peer Assisted Study Support (PASS) programme for peer guidance.

(11) SPECIFIC SUPPORT FOR DISABLED STUDENTS

Queen Mary has a central Disability and Dyslexia Service (DDS) that offers support for all students with disabilities, specific learning difficulties and mental health issues. The DDS supports all Queen Mary students: full-time, part-time, undergraduate, postgraduate, UK and international at all campuses and all sites.

Students can access advice, guidance and support in the following areas:

- Finding out if you have a specific learning difficulty like dyslexia
- Applying for funding through the Disabled Students' Allowance (DSA)
- Arranging DSA assessments of need
- Special arrangements in examinations
- Accessing loaned equipment (e.g. digital recorders)
- Specialist one-to-one "study skills" tuition
- Ensuring access to course materials in alternative formats (e.g. Braille)
- Providing educational support workers (e.g. note-takers, readers, library assistants)
- Mentoring support for students with mental health issues and conditions on the autistic spectrum.

(12) ADVICE AND COUNSELLING

Queen Mary has an Advice and Counselling Service (ACS), based in Geography Square, that offers support for all students at all stages of their degree studies. The full range of services offered by the ACS is detailed on their website (www.welfare.qmul.ac.uk). On this website, you will find a series of self-help and guidance booklets covering such diverse issues as adapting to life as a student at university through making a claim for extenuating circumstances to requesting an interruption of studies or withdrawing.

(13) SUPPORTING “THE STUDENT TRANSITION” AND IMPROVING YOUR PREPARATION FOR POSTGRADUATE STUDY AND/OR EMPLOYMENT

Alongside studying compulsory and elective modules covering a range of biological and/or genetic topics, there will also be opportunities for your personal growth and to develop ‘graduate attributes’ alongside your BSc degree. To support your transition into and through Higher Education, colleagues in SBCS have devised online materials and exercises in the Personal & Professional Development (PPD) pages of QMPlus at:

- https://qmplus.qmul.ac.uk/course/view.php?id=6200
In addition, the QMUL Teaching & Learning Initiative, referred to more commonly as the “QM Model”, supports the development of students’ social capital and transferable skills with a view to improving your preparation for postgraduate study and/or employment. These objectives will be achieved through a series of 10 or 15 credit modules in each academic year, designed to identify and address which of your personal competencies and skills which would benefit from further development.

In Year 1, the objectives of the QM Model will be addressed through the tutorial elements of the module BMD151 (Causes and Prevention of Disease). In Years 2 and 3, your QM Model modules may entail interdisciplinary study, team projects or community-based activities. This further increases the personalisation of your degree programme (over and above your ability to select a unique combination of elective modules in Years 2 and 3 of your degree).

(14) CHANGE OF PROGRAMME

Should you wish to be considered for a Change of Programme (CoP), either within SMD/SBCS or out of the Schools, you will need to complete a CoP form, available from the SBCS reception. Before signing and submitting your form you should meet with your Academic Advisor or a Programme Tutor to discuss the pros and cons of switching programmes. You should then return the completed and signed form to the SBCS reception to be considered and, if possible, approved by Dr Bray as the SBCS DTP. As soon as a decision has been reached, you will be emailed and advised of the outcome of your application by the SBCS SSO.

You may only request a single CoP during your degree. In each academic year, there are four deadlines for requesting a CoP, these being:

- **01 December 2018** where there are implications for the Semester B modules required on the new programme;
- **01 February 2019** where you would like your CoP to be approved before entry to the exams;
- **01 April 2019** approval of the CoP will be considered at the June Exam Board meeting, contingent on passing the requisite number of credits;
- **01 August 2019** approval of the CoP will be considered at the September Exam Board meeting, contingent on passing the requisite number of credits.

Approval will be contingent on (a) there being places available on the programme onto which you would like to transfer, and (b) meeting the admissions criteria for the new programme.
(15) OPPORTUNITIES FOR POSTGRADUATE STUDY AT QMUL

On completion of your BSc degree, you might wish to embark on a postgraduate research degree to become a Doctor of Philosophy (PhD). Increasingly, competitive applicants for PhD opportunities have not only a high class honours degree (first or upper second class honours), but they will also have completed a postgraduate taught Master of Science (MSc) or Masters by Research (MRes) degree (commonly with a Merit or Distinction).

The WHRI runs a number of MSc degree courses, such as

- MSc in Clinical Drug Development
- MSc in Forensic and Medical Sciences
- MSc in Genomic Medicine

The WHRI also runs a BHF-funded MRes course in inflammation; cellular and vascular aspects.

If you need to know more about any of the programmes listed above, please contact Dr Nina Ravic (n.ravic@qmul.ac.uk).

SBCS offers a number of MSc degrees such as

- MSc Bioinformatics
- MSc Ecology and Evolutionary Biology (EEB)
- MSc Freshwater and Marine Ecology (EEB)
- MSc Plant & Fungal Taxonomy, Diversity & Conservation
  (run in association with the Royal Botanical Gardens at Kew)

If you wish to know more about any of the MSc programmes listed above, you can contact the Director for Teaching & Learning [Postgraduate], Dr Christoph Eizaguirre (c.eizaguirre@qmul.ac.uk)

(16) LINKS WITH EMPLOYERS, PLACEMENT OPPORTUNITIES AND TRANSFERABLE SKILLS

This degree will provide graduates with skills that enable them to pursue a career in research or to teach, or to gain employment in the pharmaceutical and biotechnology industries, or other fields allied to science, technology and medicine or to apply to study medicine or undertake a PhD.

The top 2 ranked candidates from this programme, (based on their cumulative academic performance after the first 2 years of the BSc programme and UKCAT score) will be offered an interview to study medicine at Bart’s and The London School of Medicine and Dentistry.

Under QMUL’s International Exchange Programme (‘Global Opportunities’), students on most BSc and MSc programmes may have the opportunity to ‘study abroad’ at one of QMUL’s partner universities for a full year between Years 1 and 2 of their BSc degree. If you
wish to take advantage of this opportunity, you need to request a Change of Programme onto Pharmacology & Innovative Therapeutics with a Year Abroad. While the year overseas would not count towards your S3 College Mark and hence to your BSc classification, any Year Abroad should include relevant modules and you would need to meet the pass standards of the overseas university in order to graduate with the title “Pharmacology & Innovative Therapeutics with a Year Abroad”. As you will appreciate, positions on such international exchanges are subject to a successful application and are awarded on a competitive basis. (If you wish to apply to transfer on to a Year Abroad programme, in the first instance, you should discuss the pros and cons with your Academic Advisor and a Programme Tutor, as appropriate.) SBCS offers several degrees “with a Year Abroad” because we appreciate the opportunities that this can provide for personal and professional growth, and for the acquisition of transferable skills that will enrich your CV and bolster your prospects for a graduate career.

The BSc Pharmacology & Innovative Therapeutics degree prepares you for careers options that open a multitude of opportunities to make a difference in health and medicine. We look forward to working with you as you begin your University journey.