

PROGRAMME HANDBOOK FOR

BIOCHEMISTRY BSc & MSci DEGREE PROGRAMMES

Academic Year 2019-20

(1) WELCOME & OVERVIEW

Welcome to the School of Biological & Chemical Sciences (SBCS), and specifically to one of the Biochemistry degree programmes: Biochemistry BSc (C700), Biochemistry MSci (C701), Biochemistry with a Year in Industry/Research BSc (3W45) and Biochemistry with a year abroad (C70Y) .

The Biochemistry BSc programmes (provide a comprehensive training in the field of biochemistry, with an introduction to key principles of protein structure and function, the chemical sciences, cell biology, genetics and microbiology. The emphasis is given to molecular concepts of complex biological systems. These degrees are particularly suitable for those seeking to pursue a career as a professional scientist in this important field. The four-year BSc programme with a Year in Industry/Research (3W45) differs from the normal three-year C700 programme in that it incorporates a year-long placement in an industrial organisation or other research environment . The placement is taken between the second year and final year of the standard BSc programme, as does the BSc with a year abroad.

The Biochemistry MSci (C701) is suitable for those students who are seeking a professional career in Biochemistry, Structural Biology, Biophysics, Synthetic Biology, or Molecular Medicine in either an academic or an industrial environment. There is a strong emphasis on the final-year research project, which will be supervised by internationally-recognized members of staff whose expertise is in Biochemistry. The School of Biological and Chemical Sciences has distinctive strengths in Biochemistry, Structural Biology, Photosynthesis and Bioenergy, and Molecular Medicine.

Each of the biochemistry degree programmes prepares you for further study at the postgraduate level (PhD or MSc) and careers that require knowledge of biochemistry, as appropriate.

Subject to having met the progression criteria (*defined in Section 7*), you may request a single Change of Programme (CoP) between the two BSc programmes (C700 & 3W45) up until the end of Year 2, or from the BSc degree (C700) on to the MSci programme (C701) by

the end of Year 3. Alternatively, you may request a voluntary transfer from the MSci degree on to one of the two Biochemistry BSc degree programmes at any point.

In closing, can I reiterate my welcome to QMUL, to SBCS, and specifically to one of our biochemistry degree programmes. I hope that you find this programme handbook useful and that, over the next 3 or 4 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 that each build on the breadth of expertise offered by academic colleagues in the Departments of Biochemistry, as well as by colleagues from Bart's & the London School of Medicine & Dentistry. 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 John Viles

Director of Teaching & Learning [Biochemistry]

September 2019

(2) KEY NAMES / CONTACTS

ROLE	NAME	EMAIL ADDRESS
Director of Teaching & Learning (DTL) [Biochemistry]	Dr John Viles	j.viles@qmul.ac.uk
<u>Programme Directors:</u> C700 Biochemistry BSc C701 Biochemistry MSci 3W45 Biochemistry with a Year in Industry/Research BSc	Dr John Viles Dr John Viles Dr Ewan Main	j.viles@qmul.ac.uk j.viles@qmul.ac.uk e.main@qmul.ac.uk
<u>Programme Tutors:</u>	Dr Vidya Drabari & Chris Duffy	v.drabari@qmul.ac.uk c.duffy@qmul.ac.uk
<u>Biochemistry Academic Advisor</u>	Vidia Darbari Chris Duffy Guy Hanke Bob Janes Ewan Main Conrad Mullineaux Alex Ruban Peter Thorpe John Viles	
Student Support Officer	Ms Shaheda Batha	s.batha@qmul.ac.uk
Director of Taught Programmes (DTP)	Dr Christopher Bray	c.bray@qmul.ac.uk

(3) PROGRAMME AIMS

Each of the Biochemistry degree programmes integrates biology and chemistry, providing a molecular-level description of the living world. The application of molecular concepts to complex biological systems is at the cutting edge of science in the twenty-first century. Students following each of these programmes receive instruction in key biochemical concepts, the chemistry underpinning these concepts and the applications of biochemistry in biotechnology and the treatment of disease. The programmes also provide instruction in related subjects such as molecular biology, neuroscience, cell biology, immunology.

In addition to the programme aims defined above, both of the Biochemistry BSc programmes and the Biochemistry MSci aim 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 learning.

(4) WHAT WILL YOU BE EXPECTED TO ACHIEVE?

In each of the BSc programmes (C700 & 3W45) and in the Biochemistry MSci programme (C701), you will be expected to achieve the following learning outcomes:

Academic Content	<p>On successful completion of your BSc/MSci programme, you will have studied:</p> <ol style="list-style-type: none"> 1. Essential facts, fundamental concepts, principles and theories fundamental to biochemistry. 2. Facts, concepts, principles and theories across a range of topics in chemistry; including biological and organic chemistry. 3. Facts, concepts, principles and theories across a wide range of topics in biology; including molecular biology, cell biology and genetics. 4. Emphasis on structure and function of proteins, in particular membrane proteins and enzymes. 5. Emphasis on modern biochemical techniques including a range of spectroscopies and X-ray crystallography. 6. Aspects of molecular medicine and disease processes at the molecular level.
Disciplinary Skills	<p>On successful completion of your BSc/MSci programme, you will be able to:</p> <ol style="list-style-type: none"> 1. Reason critically. 2. Integrate theory and practice. 3. Identify and formulate problems. 4. Apply biochemical knowledge and problem-solving skills in a wide range of theoretical and practical situations. 5. Analyse and evaluate/interpret the results of controlled experiments. 6. Devise strategies for the retrieval and selection of relevant information from a wide range of sources.

Attributes	<p>On successful completion of your BSc/MSci programme, you will be able to:</p> <ol style="list-style-type: none"> 1. Communicate effectively by written and/or verbal means. 2. Manage time, prioritise workloads and work to deadlines. 3. Undertake independent learning. 4. Work independently. 5. Participate constructively as a member of a group/team. 6. Assess the relevance, importance and reliability of the ideas of others. 7. Appreciate and discuss the role and impact of science in society. 8. Use IT/computer-based technology to locate information, to analyse, manipulate and present data.
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(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 **tutorial workshops**, **problem classes** and **laboratory classes** (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.

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.

(6) 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/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 biochemistry 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:

	Coursework	Exam
Year 1	25%	75%
Year 2	25%	75%
Year 3	20%	80%

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. Practical skills and report-writing skills will be assessed through written laboratory reports, which include attention to quantitative accuracy. 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.

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:

	Default exam duration	Number of sections	Section A	Section B	Section C
Year 1	1.5 hours	2	Multiple Choice Questions (50% of mark)	Short Answer Questions (choice of 1 from 2) (50% of mark)	N/A
Year 2	2 hours	3	Multiple Choice Questions (30% of mark)	Short Answer Questions (choice of 1 from 2) (30% of mark)	Essay (choice of 1 from 3) (40% of mark)
Year 3	3 hours	3	Multiple Choice Questions (34% of mark)	Essay (choice of 1 from 3) (33% of mark)	Essay (choice of 1 from 3) (33% of mark)

Commencing in the 2019-20 academic year, QMUL will have two main exam periods. The first period, lasting two weeks, will take place in January and will assess modules completed in Semester A. The second exam period, predominantly in May, will last four weeks and will include exams for modules completed in Semester B and year-long modules. The exam timetable will be released to students in approximately week 10 of each semester.

(7.1) BIOCHEMISTRY BSc (C700)

To **progress beyond Year 1** of the Biochemistry BSc programme, 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 Biochemistry BSc degree, you must pass **at least 315 credits** across 3 years. *An alternative way of considering these criteria is that you can fail no more than 3 x 15 credit modules across 3 years.* (You will have only one opportunity to re-sit any module exam, typically in August, and your mark will be fixed at 40% if you pass.)

(7.2) BIOCHEMISTRY WITH A YEAR IN INDUSTRY/RESEARCH BSc (3W45)

To **progress beyond Year 1** of the Biochemistry with a Year in Industry/Research BSc programme, you must pass **at least 7 modules** x 15 credits (*i.e.* **105 credits** in total) and achieve a **Year 1 average** mark of **at least 65.0%**. (*Students who fail to meet either one of these criteria at the end of Year 1 will be transferred to the C700, 3 year BSc programme and be considered for progression under the rules that apply to that programme, defined above.*) All industrial/research placements for Year 3 of this 4 year BSc programme must be approved by the School (in regard to professional suitability, and provision of a satisfactory training environment). If you fail to obtain a placement for the third year, you will be

transferred onto the C700 programme at the end of Year 2 (*subject to meeting the standard progression criteria, defined above*).

Progression from Year 3 **to Year 4** of the Year in Industry/Research BSc will be subject to achieving a pass grade in the 120 credit **BIO390 Professional Placement in Biochemistry** module. In the event that you fail the Professional Placement module at the first attempt, then the Exam Board will recommend that you:

- be permitted to **re-sit the module** BIO390 by re-submission of the student report and/or re-presentation; *or*
- be deemed to have **irretrievably failed** the BIO390 module.

Failure of the Professional Placement module would lead to an enforced CoP to the C700 BSc programme, and you would return to Queen Mary to resume your studies in the final year of the C700 programme.

(7.3) BIOCHEMISTRY MSci (C701)

To **progress beyond Year 1** of the Biochemistry MSci programme, you must pass **at least 7 modules** x 15 credits (*i.e.* **105 credits** in total) and achieve a **Year 1 average** mark of **at least 60.0%**. To **progress beyond Year 2** of the MSci programme, you must pass **at least 210 credits** cumulatively and achieve an **average** mark **across Years 1 and 2** (weighted 1:3) of **at least 60.0%**. Likewise to **progress from Year 3** in to the fourth and final year of the MSci programme, you must pass **at least 315 credits** cumulatively and achieve an **average** mark **across Years 1 to 3 inclusive** (weighted 1:3:6) of **at least 60.0%**. To **graduate** with a Biochemistry MSci degree, you must pass **at least 420 credits** across 3 years with a **weighted average** (1:3:6:6) across 4 years of **at least 60.0%**.

Candidates that fail to meet the progression criteria required to remain on the MSci programme at the end of Year 1 or at the end of Year 2 will be considered by the Biochemistry and Biological Sciences Subject Exam Board (BIO-SEB) and, in the absence of extenuating circumstances, will be subject to an **enforced CoP** on to **C700**. Candidates that fail to meet the progression criteria at the end of Year 3 will be classified for a Biochemistry BSc degree (or alternative award) based on their **S3 College Mark** at the **end of Year 3** (as for all other candidates on C700). Likewise, candidates who enter Year 4 but do not subsequently meet the requirements for the award of an MSci degree will be considered for the award of the Biochemistry BSc classified on the basis of their S3 College Mark at the end of Year 3 (*i.e.* discounting any marks contribution from Year 4).

(8) HOW ARE THE PROGRAMMES 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 and 480 credits over the course of your 4 year MSci degree). 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 Director of Teaching and Learning for Biochemistry, Dr Viles, 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.

You must satisfy the prerequisites before registering for any elective module. Please note that some elective modules have to operate **caps** on the maximum number of students that the module can accommodate. 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 outlines which follow are **indicative** only. Every effort will be made to run all of the modules advertised in these degree programme outlines. 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.

(8.1) BIOCHEMISTRY BSc (C700)

	SEMESTER A	SEMESTER B
Year 1	BIO101: Essential Skills for Biochemists (10) BIO111 Cell Biology (15) BIO163 Molecular Genetics (15) BIO190 Practical Molecular & Cellular Biology (10) CHE102A Fundamentals of Organic Chemistry (15)	BIO123 Physiology (15) BIO161 Basic Biochemistry (15) BIO198 Practical Biochemistry (10) CHE102B Fundamentals of Organic Chemistry (15)
Year 2	BIO202 Biochemistry Communication (15) BIO223 Genes & Bioinformatics (15) BIO269 Techniques for Biological & Chemical Sciences (15) CHE202A Structure & Reactivity in Organic Chemistry – Sem A (15) CHE206A <i>Pharmaceutical Chemistry – Sem A (15)</i> BIO213 <i>Cell Biology & Developmental Genetics (15)</i> BIO215 <i>Comparative & Integrative Physiology (15)</i> SMD5251 Engaging the Public in Science (15 credits)	BIO263 Membrane & Cellular Biochemistry (15) BIO265 Metabolic Pathways (15) BIO231 <i>Microbial Physiology & Growth (15)</i> BIO241 <i>Transmission Genetics (15)</i> CHE202B <i>Structure & Reactivity in Organic Chemistry – Sem B (15)</i> CHE206B <i>Pharmaceutical Chemistry – Sem B (15)†</i>
Year 3	BIO301 Biochemistry Communication (15)	
	BIO361 Membrane Proteins (15) BIO363 Molecular Basis of Disease (15) CHE302 <i>Organic Synthesis (15)</i> CHE309 Topics in Biological Chemistry (15)	BIO365 Enzyme Catalysis (15) BIO367 Protein Structure, Folding and Assemblies (15) BIO327 <i>Functional Genomics & Epigenetics (15)</i> BIO333 <i>Neuroscience: From Molecules to Behaviour (15)</i> CHE306U Advanced Pharmaceutical Chemistry (15)
	BIO600 Biological Sciences Research Project (30) OR BIO603 Project Skills in the Life Sciences (30)	

† You may only select CHE206B as a Semester B elective if you select and complete CHE206A in Semester A.

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: There are 6 compulsory, 15 credit Year 2 modules: **BIO202** (Biochemistry Communication), **BIO223** (Genes & Bioinformatics), **BIO263** (Membrane & Cellular Biochemistry), **BIO265** (Metabolic Pathways), **BIO269** (Techniques in Biological & Chemical Sciences) and **CHE202A** (Structure & Reactivity in Organic Chemistry – Sem A) or **CHE206A**

Pharmaceutical Chemistry . This will leave you with a choice of **2 elective** modules (30 credits) from 8 potential electives.

Year 3: There are **5 compulsory**, 15 credit Year 3 modules: **BIO301** (Biochemistry Communication), **BIO361** (Membrane Proteins), **BIO363** (Molecular Basis of Disease), **BIO365** (Enzyme Catalysis) and **BIO367** (Protein Structure, Folding and Assemblies). In addition, you must select one of the two 30 credit modules: **either BIO600** (Biological Sciences Research Project) **or BIO603** (Project Skills in the Life Sciences). In order to have a free choice to take BIO600 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. This leaves you with a choice of **1 elective** module (15 credits) from 5 potential electives. (This elective module can be chosen from those offered in either Semester A or B.)

(8.2) BIOCHEMISTRY WITH A YEAR IN INDUSTRY/RESEARCH BSc (3W45)

The programme for Biochemistry with a Year in Industry/Research (3W45) is identical to the Biochemistry BSc programme (C700) described above with the exception that you will intercalate a **year-long, 120 credit module** (BIO390 Professional Placement in Biochemistry) in **Year 3** of their programme before progressing to complete those modules listed for Year 3 of C700 in their fourth and final year of the 3W45 BSc programme.

As indicated above, all placements must be approved by the School (in regard to professional suitability, and provision of a satisfactory training environment) and candidates failing to obtain a placement for the third year (or those that fail the Professional Placement module) will be transferred onto the C700 programme at the end of year 2.

(8.3) BIOCHEMISTRY MSci (C701)

The first 3 years of the Biochemistry MSci programme are identical to the Biochemistry BSc (C700) programme described above. Progression criteria to enter the 4th year include a 60% weighted (1:3:6) average over the first 3 years. In Year 4, you will study two compulsory modules, as follows:

	SEMESTER A	SEMESTER B
Year 4	BIO491 Advanced Biochemical Research Methods (30) BIO790 Biochemical MSci Research Project (90)	

BIO790 is a **core** module – you are required to pass BIO790 in order to graduate with an MSci (rather than a BSc) degree.

(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 relevant **Programme Director** where you can see a way that your teaching could be significantly improved or you have cause for complaint. 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.

The Student-Staff Liaison Committee (**SSLC**), Chaired by the Director for Student Experience, Dr Brennan, provides a **formal** means of communication and discussion between the School and its students. The committee consists of **elected student representatives** from each year in the School, together with appropriate representation from staff within the School. 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 Teaching & Learning Committee (**TLC**) advises the School's Director of Taught Programmes (DTP), 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). Student views are incorporated in the committee’s work 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. SBCS no longer operates 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, the School has several experienced **Programme Tutors** and a **Student Support Officer** plus **Student Support Assistant** who can address any concerns that you might have. (The DTP is 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.)

SBCS students also operate a Peer Assisted Study Support (PASS) programme for peer guidance. PASS is a subject-based mentoring scheme, run for first-year students by higher-year undergraduates.

(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>
- <https://qmplus.qmul.ac.uk/course/view.php?id=6201>.

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**.

(14) CHANGE OF PROGRAMME

Due to the common content of the first 2 years of study, up until the end of Year 2 (**01 April**), you can request a Change of Programme (**CoP**) between any of the 3 Biochemistry degree programmes. A CoP between the Biochemistry BSc (C700) and Biochemistry MSci (C701) programmes, in either direction, can be requested at any point up to the end of Year 3 (**01 April**).

Should you wish to be considered for a Change of Programme, 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 relevant **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 the **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 request a **single** CoP during your degree. In each academic year, there are **four deadlines** for requesting a CoP, these being:

Approval will be contingent on (a) there being **places available** on the programme onto which you would like to transfer, and (b) **meeting** the **progression criteria** for the new programme (*see Section 7*).

(15) OPPORTUNITIES FOR POSTGRADUATE STUDY IN THE SCHOOL OF BIOLOGICAL & CHEMICAL SCIENCES

On completion of your BSc/MSci 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).

At the time of writing, SBCS does not offer an MSc in Biochemistry, but does offer the following biological MSc degrees which exploit the research expertise of staff in the Departments of Organismal Biology and of Cell & Molecular Biology:

- MSc Aquatic Ecology by Research (AER)
- MSc Bioinformatics
- MSc Ecology and Evolutionary Biology (EEB)
- MSc Ecology and Evolutionary Genomics (EEG)

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

All of the Biochemistry degree programmes give an excellent training for a career as a research scientist as well as many transferable skills for other employment routes. Graduates of the Year in Industry/Research BSc programme will also have gained specific experience of the working practices and working environments afforded by those employers offering placements; organisations that may consider students for placements would include major biotechnology and pharmaceutical companies.

The Biochemistry MSci programme is aimed at producing world-class graduates who will get PhD positions at the world's best universities. Graduates from the Biochemistry MSci are also expected to get jobs in global-companies as well as Biotech and Pharma start-up companies. Some graduates may even be positioned to begin their *own* start-up companies.

Under QMUL's International Exchange Programme ('Global Opportunities'), students on most BSc and MSci programmes may have the opportunity to 'study abroad' at one of QMUL's partner universities for a full year between Years 2 and 3 of their BSc/MSci degree. If you wish to take advantage of this opportunity, you would have to request a CoP onto **Biochemistry with a Year Abroad**. While the year overseas would not count towards your S3 College Mark and hence to your BSc/MSci 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 "Biochemistry 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.

All students are encouraged to visit the QMUL Careers & Enterprise Service in the Queens' Building and use the resources available on their website (www.careers.qmul.ac.uk). The Careers Service run employer and alumni events on campus, offer one-to-one careers advice, practice interviews, CV and application advice and resources to help you with job hunting. Graduates can access the service for up to two years after graduation.