

Programme Specification for Postgraduate Programme Leading to: MSc in Disease Mechanisms and Therapeutics

Applicable for all postgraduate students starting in September 2021

Version No.	Date	Notes – QA USE ONLY	QA
1	May 2021	2021/22 version of programme spec created with no changes	BT

Postgraduate Taught Programme	
1. Awarding institution	Brunel University London
2. Teaching institution(s)	Brunel University London
3. Home College/Department/Division	College of Health, Medicine & Life Sciences/ Life Sciences/ Biosciences
4. Contributing College/Department/Division/ Associated Institution	None
5. Programme accredited by	N/A
6. Final award(s) and FHEQ Level of Award	MSc FHEQ level 7
7. Programme title	MSc in Disease Mechanisms and Therapeutics
8. Programme type (single honours/joint)	N/A
9. Normal length of programme (in months) for each mode of study	12 months full time 24 months part time
10. Maximum period of registration for each mode of study	Normal duration plus 2 years
11. Variation(s) to September start	N/A
12. Modes of study	Full time, Part time
13. Modes of delivery	Standard
14. Intermediate awards and titles and FHEQ Level of Award	PG Diploma in Disease Mechanisms and Therapeutics PG Certificate in Disease Mechanisms and Therapeutics
15. UCAS Code	N/A
16. HECoS Code	100822 (Cell Biology)
17. Route Code	C131PDISMETH
18. Relevant subject benchmark statements and other external and internal reference points used to inform programme design	UK Quality Code for Higher Education Brunel 2030 Brunel Placement Learning Policy, as published under the 'Placements' section of the ' Managing Higher Education Provision with Others ' page.
19. Admission Requirements	A UK first or second class Honours degree in the field of Biosciences. Other qualifications including equivalent internationally recognised qualification or relevant experience from health professionals (eg doctors; nurses; MLSOs) will be assessed on an individual basis and a request for completion of an online biological test in molecular and cell biology may be required. Applicants with a third class honours degree or other lower qualifications will be considered if supported by science 'A' levels (or equivalent) and

	<p>relevant work experience. Such applicants may be required to attend an interview.</p> <p>Levels of English for non-native speakers are outlined on Brunel International's language requirements pages, and are equivalent to IELTS 6.5 (minimum 5.5 in all areas).</p>
20. Other relevant information (e.g. study abroad, additional information on placements)	N/A
21. Programme regulations not specified in Senate Regulation 3. Any departure from regulations specified in Senate Regulation 3 must be stated here and approved by Senate.	N/A
22. Further information about the programme is available from the College website.	<p>Link to programme information on the College website: http://www.brunel.ac.uk/study/postgraduate/Disease-Mechanisms-and-Therapeutics-MSc</p>

23. EDUCATIONAL AIMS OF THE PROGRAMME

The programme is designed to provide students with the necessary knowledge and understanding in molecular biology and its impact on biomedicine. This programme has specific emphasis on bioinformatics, providing students with skills in maths, statistics and computational biology that are lacking elsewhere at post-graduate level.

Our students will be trained to conduct research related to pressing contemporary issues in the biomedicine that, with the practical laboratory skills acquired, will represent a perfect platform for a post-graduate research career, as well as providing excellent training for students seeking a career in the pharmaceutical industry and research institutes.

With the training provided in different aspects of science communications, this programme will also offer a great opportunity for students seeking positions within a variety of sectors including patent law, scientific publishing, teaching and science policy-making.

Through group work, students will be encouraged to exercise leadership, initiative, responsibility and to appreciate the need for continual professional development.

24. PROGRAMME AND INTERMEDIATE LEARNING OUTCOMES

The programme provides opportunities for students to develop and demonstrate knowledge and understanding (K) cognitive (thinking) skills (C) and other skills and attributes (S) in the following areas:

Masters FHEQ Level	Category (K = knowledge and understanding, C = cognitive (thinking) skills, S = other skills and attributes)	Learning Outcome	Masters Award Only	Associated Assessment Blocks Code(s)	Associated Study Blocks Code(s)	Associated Modular Blocks Code(s)
Masters and FHEQ Level 7						
7	K	Demonstrate critical understanding of advanced theoretical and practical aspects of a range of human diseases and recognise the value of how post-genomic technologies direct innovative approaches to the treatments of diseases.		BB5804	BB5704 BB5706	
				BB5803	BB5708 BB5709	
				BB5806	BB5707 BB5710 BB5711 BB5712 BB5713	
7	K	Demonstrate an in depth understanding of the principle of Cellular and Molecular Biology and their applications to medicine.		BB5804	BB5704	
				BB5803	BB5703 BB5708 BB5709	
				BB5806	BB5710 BB5711 BB5712 BB5713	
7	K	Demonstrate critical understanding of the challenges of the current disease treatments and the need for		BB5806	BB5710 BB5711 BB5712 BB5713	

		development of new therapies.				
7	K	Demonstrate a sophisticated understanding of how to work safely in the laboratory whilst employing a range of research and experimental techniques.		BB5A3	BB5705	
						BB5604
7	C	Critically evaluate and synthesise the current scientific literature related to a specific topic in medicine.		BB5804	BB5704	
				BB5803	BB5708 BB5709	
						BB5604
7	C	Develop a research plan, formulate hypotheses and conduct a research project.			BB5705	BB5604
7	C	Report on research findings and evaluate the relevance in a cognate research area.		BB5804	BB5704 BB5706	
				BB5806	BB5710 BB5711 BB5712 BB5713	
						BB5604
7	S	Be able to carry out advanced data analyses with the ability to select and apply appropriate mathematical and statistical methods.		BB5806	BB5707	
						BB5604
7	S	Critically analyse data and be able to present complex research findings in a clear and concise manner.		BB5804	BB5704 BB5706	
				BB5806	BB5707 BB5710 BB5711 BB5712 BB5713	
						BB5604
7	S	Effectively communicate complex scientific issues (theoretical and research in written and oral forms).		BB5804	BB5704 BB5706	
				BB5806	BB5710 BB5711 BB5712 BB5713	
						BB5604
7	S	Demonstrate project management skills by setting objectives, planning and managing	BB5604			

		workloads through effective use of time.				
<p>Learning/teaching strategies and methods to enable learning outcomes to be achieved, including formative assessments</p>						
<p>To ensure that students have the key fundamental knowledge of molecular and cellular biology, students are required to complete a formative online induction MCQ test; study support is given for those lacking this basic knowledge. This formative assessment will allow the students to understand the prior knowledge required to follow the course of studies; it will also give guidance towards independent studies before the start of the programme for those lacking these basic requirements.</p> <p>The programme content will be delivered by means of lectures (by members of the Departmental staff) and, keynote seminars. The latter will be delivered by leaders in a specific field in order to broaden student knowledge on recent research. For the seminars, students will be encouraged to introduce the speaker, chair the question session and conclude the session/seminar. They will have opportunity to network with the speakers afterwards.</p> <p>Students will be asked to produce self-directed learning presentations or reports on a particular aspect of human diseases. During the research dissertation project, students will have the opportunity to deepen their knowledge in a specific subject area, to be trained in the research methods needed for the project, to practice strategic experimental design and to exercise critical data analyses. The overall emphasis of the course is to train the next generation of scientists ready for the current and future global challenges of biomedicine.</p> <p>Critical thinking and evaluative skills will be developed during a variety of practically based and more traditional lecture based study blocks. Transferable and employability skills will be developed in all study blocks. Similarly, communication and presentation skills will be developed in several study and assessment blocks. IT and computing skills will be developed throughout the course.</p> <p>The Programme has a focus on continuous professional development. In addition to practical competencies, writing skills will be developed through several taught modules and assessments and student will receive both written and verbal feedback on their progresses via assessed assignments. For the dissertation project, each student will be assigned an academic supervisor who will guide their work and advice on student progress. Peer review feedback will also be provided during the course in relation to your oral presentation skills. Oral presentation skills will be also formatively assessed during some of the compulsory assessment blocks via group work tasks.</p>						
<p>Summative assessment strategies and methods to enable learning outcomes to be demonstrated.</p>						
<p>Knowledge, intellectual, practical, professional and transferable skills will be assessed by a variety of methods including written examinations, laboratory reports, problem solving assessments and completion of the research project and dissertation. Transferable skills will also be assessed through a diversified portfolio of written reports along with oral and poster presentations.</p> <p>Constructive feedback will be provided in all assessments and tailored to advise students on their progress throughout the course. The deadlines will be spread through the academic year to both monitor students progress and to allow the student to improve their performance based on the feedback received.</p>						

25. Programme Structure, progression and award requirements

Programme structures and features: levels, assessment blocks, credit and progression and award requirements

- **Compulsory block:** one which all students registered for the award are required to take as part of their programme of study. These will be listed in the left hand column;
- **Optional block:** one which students choose from an 'option range'. These will be listed in the right hand column;
- A **core assessment** is an assessment identified within an assessment block or modular block (either

compulsory or optional) which must be passed (at grade C- or better) in order to be eligible to progress and to be eligible for the final award. All core assessments must be specified on the programme specification next to the appropriate assessment or modular block:

Where students are expected to pass the block at C- or better, but not necessarily all elements, then the block itself is core.

e.g. AB5500 Project (40)

Core: Block

Where only some elements of assessments are required to be passed at C- or better, these will be identified by listing each element that is core

e.g. ABXXX1 Title (XX credits)

Core: 1 & 4

Where students are expected to pass all assessments in a block then this will be identified. By setting the assessment this way, students are also required to pass the block by default. This will be identified thus:

e.g. ABXXXX Title (XX credits)

Core: All, Block

- A **non-core assessment** does not have to be passed at grade C- or better, but must D- or better in order to be eligible for the final award.

Masters and FHEQ Level 7	
<p>Compulsory assessment block codes, titles and credit</p> <p>BB5804 Scientific Communication (30 Credits)</p> <p>BB5805 Lab safety, Research Techniques and Ethics (30 Credits)</p> <p>BB5803 Synoptic Assessment (30 Credits)</p> <p>BB5806 Speciality-Specific Assessment (30 Credits)</p> <p>Year 1: BB5804, BB5805, BB5803, BB5806 Year 2: BB5804 (cont.), BB5806 (cont.)</p>	<p>Optional assessment block codes, titles and credits</p>
<p>Compulsory study block codes, titles and credit volume</p> <p>BB5703 Molecular and Cellular Biology (2 credits)</p> <p>BB5704 Scientific Communication (15 Credits)</p> <p>BB5705 Lab safety, Research Techniques and Ethics (30 Credits)</p> <p>BB5706 Cell and Receptors of the Immune System (15 Credits)</p> <p>BB5707 Statistic, Bioinformatics and Omics (15 Credits)</p> <p>BB5708 Gene Regulation and Epigenetic (15 Credits)</p> <p>BB5709 Cell Signalling in Health and Disease (15 credits)</p> <p>BB5714 Tutoring (0- zero credits)</p> <p>Year 1: BB5703, BB5704, BB5705, BB5707, BB5708, BB5709 Year 2: BB5704 (cont.), BB5706, optional block (BB5710 / BB5711 / BB5712 / BB5713)</p>	<p>Optional Study block codes, titles and credit volume</p> <p>Select one from:</p> <p>BB5710 Cancer Biology and Therapy (15 Credits)</p> <p>BB5711 Genomic Technologies (15 Credits)</p> <p>BB5712 Vaccine and Immunization (15 Credits)</p> <p>BB5713 Radiation, Toxicology and Pollution (15 Credits)</p>

Compulsory modular block codes, titles and credits	Optional modular block codes, titles and credits
<p>BB5604 MSc Dissertation Research Project (60 Credits) Core: Block</p> <p>Year 2: BB5604</p>	

Masters and FHEQ Level 7 Progression and Award Requirements

As per [Senate Regulation 3](#)

PGDip may not be awarded by substitution of the dissertation (BB5604) for modular/assessment blocks in the taught part of the programme.

Please note: this specification provides a concise summary of the main features of the programme and the learning outcomes that a student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. More detailed information on the learning outcomes, content and teaching, learning and assessment methods can be found in the modular block, assessment and study block outlines and other programme and block information. The accuracy of the information contained in this document is reviewed by the University from time to time and whenever a modification occurs.