Programme Title: Joint Programme in Biomedical Sciences

Programme Specification

Awarding Body/Institution	Queen Mary, University of London
Teaching Institution	Queen Mary, University of London
Name of Final Award and Programme Title	B.Sc./Joint Programme in Biomedical Sciences
Name of Interim Award(s)	
Duration of Study / Period of Registration	5 years
QM Programme Code / UCAS Code(s)	B9N0
QAA Benchmark Group	Biomedical Science
FHEQ Level of Award	Level 6
Programme Accredited by	n/a
Date Programme Specification Approved	
Responsible School / Institute	School of Biological & Behavioural Sciences

Schools which will also be involved in teaching part of the programme

Institution(s) other than Queen Mary that will provide some teaching for the programme
Nanchang University

Programme Outline

Queen Mary's Joint Programme (JP) in Biomedical Sciences, delivered in partnership with Nanchang University in China's Jiangxi province, draws on the academic expertise of both institutions and on the strengths of two distinct educational cultures. The programme – which will be taught entirely in English – builds on the success of the award-winning JP between QMUL and Beijing University of Posts and Telecommunications (BUPT), and leads to the award of both a University of London BSc and a Bachelor's in Clinical Medicine from Nanchang University. The jointly-planned programme was approved by the Chinese Ministry of Education in 2012 and approved in its original form by TPB when submitted as Part 2 approval documentation in July 2013

Aims of the Programme

The JP will create graduates equipped for employment in scientific research in China or around the world (including the UK, Europe and US) or to practice clinical medicine in China, and leads to the award of two degrees: a University of London BSc and a Bachelor's in Clinical Medicine from Nanchang University. In the first of these, students will be provided with a strong background in modern biosciences, including subject areas such as anatomy, physiology, genetics, biochemistry, physiology, haematology, cancer biology and immunology. Students will also receive a thorough practical training in these subjects, with

particular emphasis on biomedical science techniques in research and other research skills. In the second strand of the JP, students will learn about clinical medical practice.

Together, these two parts of the JP will equip students with the skills needed for (i) progression to medical and dental degree courses and professions allied to medicine; (ii) employment in hospital biomedical science laboratories.; (iii) academic and clinical research; (iv) employment in biotechnology, pharmaceutical, microbiology based industries.

The programme aims to provide a rational, flexibly structured and coherent programme of study which is relevant to the needs of employers, facilitates the professional development of the student and lays the foundations for a successful career to the benefit of society. It will provide a sound knowledge base in the fields studied and develop key transferable skills in the areas of communication, numeracy, information technology, leadership, working with others, problem solving, time and task management. It will foster the development of an enquiring, open-minded and creative attitude, tempered with scientific discipline and social awareness, which encourages lifelong learning.

What Will You Be Expected to Achieve?

Students who successfully complete the programme will have knowledge and understanding of the topics outlined immediately below, as well as the skills and attributes described in the subsequent sections.

Academic Content:	
A 1	Knowledge of a broad-range of topics in biomedical science including: cell biology, gross anatomy, pathology, human physiology, general microbiology, human molecular biology, human & medical genetics, biochemistry, human metabolism, immunology, pharmacology, endocrinology.
A 2	Knowledge to an advanced level in more specialised areas of biomedical science including: histology & cell pathology, haematology and transfusion science, serology, cancer biology, molecular clinical microbiology, genetics and genomics, endocrine physiology and biochemistry.
A 3	Experimental techniques in the biomedical sciences.

Disciplinary Skills - able to:	
B 1	Apply biomedical knowledge and principles, together with problem solving skills, in a wide range of theoretical and practical situations. Understand the importance of biomedical sciences to laboratory and clinical diagnostics.
B 2	Conduct practical work efficiently and with due regard for safety.
B 3	Use a wide range of laboratory and analytical equipment.
B 4	Analyse and evaluate/interpret the results of controlled experiments.
B 5	Retrieve, filter and collate biomedical data from a variety of information sources.
B 6	Prepare scientific/technical reports.

Attributes:	
C 1	Communicate effectively by written and verbal means.

C2	Capacity for independent learning, and to work independently.
C3	Able to participate constructively as a member of a group/team, with skills to influence, negotiate and lead.
C4	Assess the relevance, importance and reliability of the ideas of others and of different sources of information.
C5	Competent in the use of computer-based technology, and in the manipulation and analysis of quantitative data.
C6	Awareness of the role and impact of science in society, including the global perspective.
C7	Use information for evidence-based decision-making and creative thinking.

How Will You Learn?

Knowledge and skills are developed in a progressive way throughout the programme.

Academic Content
The programme includes scheduled lectures, practical classes, workshops, seminars, tutorials and practical demonstrations. Students are also expected to use independent and self-directed learning to consolidate the lecture material, for completion of coursework and in-preparation for follow-on sessions. Support for learning is provided through the Library, Queen Mary's online learning environment (QMplus), by teaching and administrative staff at Nanchang University and via QM's staff in China and in the UK.

Practical and Problem-oriented Disciplinary Skills
Practical skills will be taught as part of organised practical classes, during the early stages of the programme. Workshops 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.

Graduate Attributes
Queen Mary's graduate attributes are developed in a progressive fashion throughout the programme. The project modules provide further opportunities for the development of transferable skills and other aspects of these attributes.

How Will You Be Assessed?

Assessment of knowledge is through a combination of unseen written examinations and assessed coursework. The exact nature of the coursework varies from module to module and may include practical reports, mini-tests, essays and problem sheets. The coursework mark may also include a contribution from online and computer-based assessments. Specific modules may include assessed oral examinations, oral presentations and extended reports/dissertations. Prompt feedback is provided on elements of coursework to provide an iterative learning experience, in which both knowledge and skills can be gradually developed and strengthened.

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.

How is the Programme Structured?

Subject to successful completion, students will graduate two degrees: a University of London BSc and a Bachelor's in Clinical Medicine from Nanchang University. Students must complete both degrees. : it is not possible to graduate with one or the other

alone.

All the modules listed in the following section of this programme specification contribute directly to the BSc award. All modules are core modules - this means that they must be taken and must also be passed or compensated fails.

The modules constituting the BSc programme are primarily the responsibility of QMUL. The exceptions are the following modules: English 1, English 2, Physiology, Pharmacology, Medical Microbiology, Histology and Embryology (with codes beginning NNC), which are the responsibility of Nanchang University.

In addition to these modules, Nanchang will teach various modules which contribute towards their medical degree, but do not contribute to the classification of the BSc award. These additional modules fall into two main groups.

The first group of these modules is specifically medical. They are mostly taught in year 4 and include the following modules: Preventive medicine; Surgery 1; Diagnostics; Anesthesiology; Medical imaging diagnostics; Infectious diseases 1; Opthalmology; Dermatovenereology; Internal medicine 1; Surgery 2; Psychiatry; Neurology; Paediatrics; Gynecology and Obstetrics; Emergency medicine; Stomatology; Basic clinical skills training. In Year 5, students will work in hospitals on a variety of placements.

The second group is comprised of a number of social/political modules, taught in years 1-3, which all Chinese students are required to take. These include: Situation and policy 1-4; Physical education 1-4; Ethics and essentials of laws; Outline of contemporary Chinese history; Military theory and training; Essentials of Maoism, Deng's theory and on three represents [sic]; General principles of Marxism.

Although they do not count towards BSc classificiation, all these additional modules (in both groups) must be passed in order for students to graduate with the two degrees.

Academic Year of Study 1

Module Title	Module Code	Credits	Level	Module Selection Status	Academic Year of Study	Semester
The Human Cell	SNU101	15	4	Core	1	Semester 1
Histology and Histopathology	NNC159	15	4	Core	1	Semester 1
Human anatomy	SNU103	15	4	Core	1	Semester 2
Basic Medical Genetics	SNU106	15	4	Core	1	Semester 2
Physiology	NNC156	15	4	Core	1	Semester 2
English 1a	NNC157	15	4	Core	1	Semester 1
English 1b	NNC158	15	4	Core	1	Semester 2
Academic and Clinical Skills 1	SNU105	15	4	Core	1	Semesters 1 & 2

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Academic Year of Study 2

Module Title	Module Code	Credits	Level	Module Selection Status	Academic Year of Study	Semester
Techniques in biomedical sciences	SNU205	7.5	5	Core	2	Semester 1
Medical microbiology	NNC253	15	5	Core	2	Semester 1
Cell biology and developmental genetics	SNU208	15	5	Core	2	Semester 2
Fundamentals of neurobiology	SNU209	15	5	Core	2	Semester 1
Molecular clinical microbiology	SNU204	15	5	Core	2	Semester 2
Basic immunology	SNU207	15	5	Core	2	Semester 2
Academic and Clinical Skills 2	SNU211	15	5	Core	2	Semesters 1 & 2
Basic and Applied Pharmacology	SNU212	15	5	Core	2	Semester 1
Essential Biochemistry for Medicine	SNU213	15	5	Core	2	Semester 1
Clinical Chemistry	SNU214	7.5	5	Core	2	Semester 2

Academic Year of Study 3

Module Title	Module Code	Credits	Level	Module Selection Status	Academic Year of Study	Semester
Biomedical sciences research project	SNU301	30	6	Elective	3	Semesters 1 & 2
Investigative Skills for the Biomedical Sciences	SNU309	30	6	Elective	3	Semesters 1 & 2

Academic Year of Study 3

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Module Title	Module Code	Credits	Level	Module Selection Status	Academic Year of Study	Semester
Pathology	SNU314	15	6	Core	3	Semester 1
Human genetics and genomics	SNU305	15	6	Core	3	Semester 1
Cancer biology	SNU306	15	6	Core	3	Semester 2
Developmental biology and cell signalling	SNU307	15	6	Core	3	Semester 2
Endocrine physiology and biochemistry	SNU303	15	6	Core	3	Semester 2
Precision Medicine	SNU310	15	6	Core	3	Semester 2

What Are the Entry Requirements?

Candidates must be able to satisfy the general admissions requirements of Nanchang University, in line with regulations from the Chinese Ministry for Education. This programme is limited to being able to recruit from the top 10% of school leavers taking the national examination (the gaokao). In addition, candidates must demonstrate sufficient English skills to ensure that they can meet the demands of studying a degree programme which is taught in English.

How Do We Listen and Act on Your Feedback?

The Student-Staff Liaison Committee (SSLC), closely modelled on the equivalent body within SBBS, provides a formal means of communication and discussion between the JP staff and its students. The committee consists of student representatives from each year of the JP, together with appropriate representation from staff from QMUL and Nanchang University. It is designed to respond to the needs of students, as well as act as a forum for discussing programme and module developments. The Student-Staff Liaison Committee meets regularly throughout the year.

SBBS's Teaching and Learning Committee advises the JP's directors 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. 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 QM schools operate an Annual Programme Review 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'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 various programme surveys and the module evaluations.

Academic Support

Nanchang University staff have pastoral responsibility for students on the programme, and it is these staff who will also deal with enquiries from parents and other Chinese-specific issues.

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The School also operates a PASS programme for peer guidance, closely modelled on QMUL's PASS programme.

Programme-specific Rules and Facts

These are specified in the Academic Regulations for the Joint Programme.

Specific Support for Disabled Students

This is provided by Nanchang University in accordance with provincial and national regulations in China.

Links With Employers, Placement Opportunities and Transferable Skills

The JP will create graduates equipped for employment in scientific research in China or around the world (including the UK, Europe and US) or to practice clinical medicine in China.

Potential employers include:
- university research laboratories
- public health laboratories and microbiology laboratories
- private pathology laboratories
- veterinary and agricultural laboratories
- forensic laboratories.

Programme Specification Approval

Person completing Programme Specification	Dr Mark Maconochie
Person responsible for management of programme	Dr Mark Maconochie
Date Programme Specification produced/amended by School Learning and Teaching Committee	17 January 2019
Date Programme Specification approved by Taught Programmes Board	

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