Aston University

PROGRAMME SPECIFICATION

Programme Title	BSc Medical Bioscience Collaborative programme with EASB
UCAS/JACS Code	
School/Subject Area	LHS / Biological & Biomedical Science
Final Award	BSc (Hons) Medical Bioscience
Interim Award(s)	
Mode(s) of Study	Distance Learning, Part-time
Normal Length of Programme	18 months.
Total Credits	240 (three stages of 80 credits)
Programme Accredited By	N/A
Dates Programme Specification Written and Revised	23rd August 2010 (Dr Anthony C. Hilton) Revised version: 25th June 2012 (Dr Stephane R. Gross)

Educational Aims of the Programme	• To provide a modern relevant degree programme in Biomedical Sciences. • To help develop the knowledge skills and understanding of the professional biomedical scientist. • To promote an awareness of the application of biomedical science knowledge to human health and welfare. • To produce graduates whose skills and qualities equip them for a role in a range of biomedical science disciplines and research in the allied health professions.

Relevant Subject Benchmark Statements and other External and Internal Reference Points used to inform programme outcomes	Informed but not bound by: Institute of Biomedical Sciences Requirements for accredited degree programmes. Health Professions Council Requirements for Approved Biomedical Sciences Courses Benchmark statements for Biomedical Science (QAA, 2007)

Programme Structures and Requirements: Levels, Modules and Credits **Stage I**				
Module Title	Credits	Level	Module Code	Core/ Elective
All students joining the course will receive APL credit for stage I based on previous qualifications and experience allowing direct entry into stage A				APL
TOTAL	120			

Programme Structures and Requirements: Levels, Modules and Credits				
Semester A				
Module Title	Credits	Level	Module Code	Core/ Elective
Block 1				
Physiology	10	5	EA1HP1	Core
Cell Biology	10	4	EA1CB1	Core
Biomedical Key Academic Skills Statistics and research methods	10	5	EA1KS1	Core
Molecular Biology	10	4	EA1MB1	Core
Block 2				
Immunology	10	5	EA2IM1	Core
Nutrition and Dietetics	10	5	EA2NU1	Core
Medical Biochemistry	10	6	EA2BC1	Core
Metabolism	10	5	EA2ME1	Core

TOTAL	80			

Programme Structures and Requirements: Levels, Modules and Credits				
Semester B				
Module Title	Credits	Level	Module Code	Core/ Elective
Block 3				
Molecular Pathology	10	5	EA3PA1	Core
Cellular Pathology	10	6	EA3CP1	Core
Applied and Molecular Biology	10	6	EA3MB2	Core
Molecular Genetics	10	5	EA3MG1	Core
BLOCK 4				
Microbiology: Microbiology & Parasitology	20	4	EA4MI1	Core
Microbiology: Clinical & Food Microbiology	20	6	EA4FC1	Core
TOTAL	80			

Programme Structures and Requirements: Levels, Modules and Credits				
Semester C				
Module Title	Credits	Level	Module Code	Core/ Elective
BLOCK 5				
Biomedical Research Project	30	6	EA5PR1	Core

Biological Basis of Human Disease	10	6	EA5BD1	Core
BLOCK 6				
Endocrinology	10	6	EA6EN1	Core
Biomedical Technology	10	5	EA6BT1	Core
Advanced Immunology	10	6	EA6IM1	Core
Haematology and Transfusion Science	10	6	EA6HT1	Core
TOTAL	80			

Programme Outcomes, Learning and Teaching and Assessment Strategies			
A. Knowledge and Understanding			
	On successful completion of their programme, students are expected to have knowledge and understanding of:	Learning, Teaching and Assessment Strategies to enable outcomes to be achieved and demonstrated	
		Learning and Teaching Methods	Assessment Methods
1	How life processes operate at the molecular, cellular, tissue and organism level.	**Lectures:** to introduce students to key concepts and theories, to indicate areas of further study and reading, to provide a broad overview of the subject to stimulate enthusiasm and desire for further independent enquiry	**Closed Book Examinations/Tests:** to examine appreciation of key issues to assess understanding of content and aims Formative assessment throughout the teaching delivery: Use of MCQ tests deployed at the end of each module
2	The structure, function and control of the human body, its component parts and major systems.		

3	The chemical processes which support life. The structure, function and metabolism, of carbohydrates, lipids, nucleic acids and proteins.	**Tutorials:** to clarify, reinforce and extend students' understanding and knowledge to give an opportunity for more individual advice on difficult concepts to give students the support which is most appropriate to their ability and experience in the subject to stimulate discussion **Independent learning supported by VLE:** to enable students to work through at their own pace and to develop an understanding of the subject	to survey students engagements and comprehension
4	The examination of cells and tissues for indicators of disease.		
5	The structure, function and control of genes; techniques used in such study and the causes and consequences of alterations of genetic material.		
6	The immune response in health and disease.		
7	The structure, physiology, biochemistry, classification and control of microorganisms.		
8	The study and investigation of the different elements that constitute blood in normal and diseased states.		

	B. **Intellectual Skills**		
	On successful completion of their programme, students are expected to be able to:	Learning, Teaching and Assessment Strategies to enable outcomes to be achieved and demonstrated	
		Learning and Teaching Methods	Assessment Methods
1	Critically review scientific literature.	**Tutorials with EASB tutors:** to give an opportunity for individual advice on difficult concepts to stimulate discussion and critical thought in a supportive environment **Project Work** to provide an opportunity to gather, interpret and critically review data	**Examinations as formative assessments in the forms o MCQs and at the end of eac teaching blocks** to assess the ability to marshal arguments, apply models, and present ideas in a coherent and literate way **Research project thesis** To assess the ability of the student to critically review scientific literature, design experiments and report on their findings.
2	Create and test hypotheses.		
3	Report on their studies verbally and in writing.		
4	Design experiments to test hypotheses.		
5	Gather, analyse and interpret data from their own studies and those of others.		

	C. **Professional Skills**		
	On successful completion of their programme, students are expected to be able to:	Learning, Teaching and Assessment Strategies to enable outcomes to be achieved and demonstrated	
		Learning and Teaching Methods	Assessment Methods
1	Be aware of the range of experimental techniques employed by a professional biomedical scientists for the diagnosis, treatment and prevention of disease	**Lectures:** to introduce students to key concepts and theories, to indicate areas of further study and reading, to provide a broad overview of the subject to stimulate enthusiasm and	**Closed Book Examinations/Tests:** to examine appreciation of key issues to assess understanding of content and aims Formative assessment

2	Select and use appropriate statistical techniques for the analysis of results derived from experiments in these areas.	desire for further independent enquiry	throughout the teaching delivery: Use of MCQ tests deployed a end of each module to survey students engagements and comprehension
3	Plan and perform a research project and be aware of the need for good laboratory practice, health and safety and ethical considerations.	**Project work** to enable students to plan and perform an independent research study, to analyse appropriately and critically review scientific data	
4	Apply scientific principles to biomedical topics and be capable of using reflective enquiry to support or refute hypotheses.		**Project thesis** to assess students' ability to plan and perform an independent research study and to analyse appropriately and critically review scientific data

	D. <u>Transferable Skills</u>		
	On successful completion of their programme, students are expected to show:	Learning, Teaching and Assessment Strategies to enable outcomes to be achieved and demonstrated	
		Learning and Teaching Methods	Assessment Methods
1	The ability to maintain clear accurate and appropriate laboratory records.	**Laboratory work** to enable students to put theory into practice and develop essential laboratory skills including data	**Practical Reports** to assess students' ability to communicate scientific investigations in a clear and accurate manner

2	Selective acquisition of data from lectures and written material.	recording and record keeping **Project thesis** to enable students to plan and execute an independent research study and to analyse appropriately and critically review scientific data **Use of CAL and VLE resources** to enable students to develop essential skills in IT literacy	**Project reports** to assess students' ability to communicate scientific investigations in a clear and accurate manner, and to assess numeracy skills and ability to evaluate experimental data
3	Communication skills covering both written and oral reports.		
4	Numeracy skills to evaluate experimental data.		
5	Work organisation and time management skills.		
6	Problem solving skills.		
7	IT skills.		
8	Competent learning skills to sustain lifelong learning and continuing professional development.		
9	Competent learning skills to sustain lifelong learning and continuing professional development.		

Entry Requirements	Entry will be to start of stage A, and will be via APEL of an approved programme of study at Diploma level. Students will normally require minimum 2.0 GPA in an approved Diploma, and a GCSE in English. Students without an appropriate GCSE qualification in English will require an English language qualification equivalent to an IELTS score of 6.0. The EASB placement test which is conside IELTS 6.0 equivalent Students will normally be in employment in a relevant setting.

Programme Regulatior	**Programme Regulations** The Aston University General Regulations for Undergraduate programmes shall apply except in the following: **Condonement:** failure in a module may be condoned in accordance with the General Regulations for Undergraduate Programmes. The maximum number of credits that can be condoned in each semester of the programme (as defined in this programme specification) is 20. **Progression**: Students will be assessed at the end of each 40 credit programme block Programme blocks are defined above. Recommendations on student progression will be made by an examination board held at the end of each 80 credit semester. Semesters are as defined above. The following regulations apply in case the case of module failure at each block, and cumulatively at any one end of semester exam board. Credits failed — Possible exam board decisions Up to 20 — Refer and carry to next semester 21 to 40 — Refer failed assessments: 50 or more — Restart or Fail and withdraw Cumulatively at each examination board when carrying failed credit. 50 or more — Fail and withdraw. For the purposes of award, Stage 2 will consist of the modules in blocks 1, 2 and 3, and stage 3 will consist of the modules in blocks 3, 4 and 5. The contribution of stage marks and the classification of award will be as per the General Regulations.

	For the purposes of award, Stage 2 will consist of the modules in blocks 1, 2 and 3 and will count for 25% of your final mark. Stage 3 will consist of the modules in blocks 4, 5 and 6 and will count for 75% of your final mark. The contribution of stage marks and the classification of award will be as per the General Regulations. The definitions for classification of award will be as in the General Regulations.
Further Information	The programme will be delivered as three semesters of 80 credits. Each semester will contain two blocks of 40 credits, delivered in a Six month period. The minimum course duration will be 18 months. Students may only enter the course at Semester A, and must progress sequentially through the semesters. The order in which blocks are taken within a semester is not proscribed.

This specification provides a concise summary of the main features of the programme and the threshold learning outcomes that a student might normally be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. **The individual modules included in the programme may differ from those included in this programme specification as our programmes are subject to continuous review.** Information on admissions requirements and career opportunities is available in the relevant prospectus. More detailed information on the learning outcomes, content and teaching, learning and assessment methods of each module can be found in the appropriate module guides and programme handbook(s) which are available to students on enrolment.

Curriculum Map for Collaborative Medical Bioscience Programme

MODULE	MODULE CODE	A1	A2	A3	A4	A5	A6	A7	A8	B1	B2	B3	B4	B5	C1	C2	C3
BLOCK 1																	
Physiology	EA1HP1	•	•							•				•			
Cell Biology	EA1CB1	•	•			•				•				•			
Biomedical Key Academic Skills Statistics and research methods	EA1CP1	•			•					•				•	•		
Molecular Biology	EA1HT1	•	•		•				•	•				•	•		
Block 2																	
Immunology	EA2 IM1	•	•				•			•				•	•		
Nutrition and Dietetics	EA2 NU1	•		•						•				•			
Medical Biochemistry	EA2 BC2	•	•	•					•	•				•	•		
Metabolism	EA2 ME1	•	•	•						•				•			
Block 3																	
Molecular Pathology	EA3PA1	•			•					•				•	•		
Molecular Biology	EA3MB1	•				•				•				•			
Applied and Molecular Biology	EA3MB2	•				•				•				•			
Molecular Genetics	EA3MG1	•				•				•				•	•		
BLOCK 4																	
Microbial Pathogenesis	EA4MP1							•		•				•			
Microbiology: Clinical & Food Microbiology	EA4FC1							•		•				•	•		
BLOCK 5																	
Biomedical Research Project	EA5PR1									•	•	•	•	•		•	•
Biological Basis of Human Disease	EA5KS1									•	•	•	•	•	•	•	•
BLOCK 6																	
Haematology and Transfusion Science	EA6BD1	•		•						•							
Endocrinology	EA6EN1	•	•							•				•	•		
Biomedical Technology	EA6BT1	•								•				•			
Advanced Immunology	EA6IM1	•	•				•			•				•	•		

Programme Outcomes for Collaborative Medical Bioscience Programme

	Knowledge and understanding
A1	How life processes operate at the molecular, cellular, tissue and organism level
A2	The structure, function and control of the human body, its component parts and major systems
A3	The chemical processes which support life. The structure, function and metabolism, of carbohydrates, lipids, nucleic acids and proteins
A4	The examination of cells and tissues for indicators of disease
A5	The structure, function and control of genes; techniques used in such study and the causes and consequences of alterations of genetic material
A6	The immune response in health and disease
A7	The structure, physiology, biochemistry, classification and control of microorganisms.
A8	The study and investigation of the different elements that constitute blood in normal and diseased states
	Intellectual skills
B1	Critically review scientific literature
B2	Create and test hypotheses
B3	Reporting studies verbally and in writing
B4	Ability to design experiments and test hypotheses
B5	Gather analyse and interpret data from their own studies and those of others

	Professional/subject specific skills
C1	Awareness of a range of experimental techniques employed by Biomedical Scientist for the diagnosis, treatment and prevention of disease.
C2	Select and use appropriate statistical techniques for the analysis of results derived from experiments in these areas.
C3	Plan and perform a research project and be aware of the need for GLP, health and safety and ethical considerations.
C4	Apply scientific principles to biomedical topics and be capable of using reflective enquiry to support or refute hypotheses.
	Transferable/key skills
D1	The ability to maintain clear accurate and appropriate laboratory records
D2	Selective acquisition of data from lectures and written material
D3	Communication skills covering both written and oral reports
D4	Acquisition of group working skills
D5	Acquisition of Numeracy skills appropriate for data analysis
D6	Acquisition of work organisation and time management skills
D7	Acquisition of problem solving skills
D8	Acquisition of IT skills
D9	Acquisition of lifelong learning and professional development skills