Aston University

PROGRAMME SPECIFICATION

(2013-14)

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 credits
Programme Accredited By	N/A
Dates Programme Specification Written and Revised	23rd August 2010 (Dr Anthony C. Hilton) Revised version: 26th February 2013 (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 current External and Internal Strategies, Policies or Research 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)

STAGE 1

Programme Structures and Requirements: Levels, Modules and Credits

Module Title	Credits	Level	Module Code	Core/Option	Condoneable Y/N	Pre-requisite(s) Y/N
All students joining the course will receive APL credit for stage I based on previous qualifications and experience allowing direct entry into stage A						

STAGE 2

Programme Structures and Requirements: Levels, Modules and Credits

Module Title	Credits	Level	Module Code	Core/Option	Condoneable Y/N	Pre-requisite(s) Y/N
Physiology	10	5	EA1HP1	Core	Y	N
Cell Biology	10	4	EA1CB1	Core	Y	N
Biomedical Key Academic Skills Statistics and research methods	10	5	EA1KS1	Core	Y	N
Molecular Biology	10	4	EA1MB1	Core	Y	N
Immunology	10	5	EA2IM1	Core	Y	N
Nutrition and Dietetics	10	5	EA2NU1	Core	Y	N
Medical Biochemistry	10	6	EA2BC1	Core	Y	N
Metabolism	10	5	EA2ME1	Core	Y	N
Molecular Pathology	10	5	EA3PA1	Core	Y	N
Cellular Pathology	10	6	EA3CP1	Core	Y	N
Endocrinology	10	6	EA3EN1	Core	Y	N
Molecular Genetics	10	5	EA3MG1	Core	Y	Y EA1MB1
TOTAL	120					

STAGE F

Programme Structures and Requirements: Levels, Modules and Credits

Module Title	Credits	Level	Module Code	Core/Option	Condoneable Y/N	Pre-requisite(s) Y/N
Microbiology: Microbiology	20	4	EA4MI1	Core	Y	N
Microbiology: Clinical & Food Microbiology	20	6	EA4FC1	Core	Y	N
Biological Basis of Human Disease	10	6	EA5BD1	Core	Y	N
Applied and Molecular Biology	10	6	EA5MB2	Core	Y	Y EA3MG1 and EA1MB1
Haematology and Transfusion Science	10	6	EA5HT1	Core	Y	N
Biomedical Technology	10	5	EA6BT1	Core	Y	N
Advanced Immunology	10	6	EA6IM1	Core	Y	Y EA2IM1
Biomedical Research Project	30	6	EA5PR1	Core		N
TOTAL	120					

Programme Outcomes, Learning and Teaching and Assessment Strategies			
A. <u>Knowledge and Understanding</u>			
	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 **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	**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 to survey students engagements and comprehension
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.		
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 the forms of MCQs and at the end of eac teaching blocks** to assess the ability to marshal arguments, apply models, and pre 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 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 e module to survey students engagements a comprehension
2	Select and use appropriate statistical techniques for the analysis of results derived from experiments in these areas.		
3	Plan and perform a research project and be aware of the need for good laboratory practice, health and safety and ethical considerations.		
4	Apply scientific principles to biomedical topics and be capable of using reflective enquiry to support or refute hypotheses.	**Project work** to enable students to plan and perform an independent research study, to analyse appropriately and critically review scientific data	**Project thesis** to assess students' ability to plan and perform an independent research study and to analyse appropriately and critically review scientific data

D. **Transferable Skills**			
	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 recording and record keeping	**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.		
3	Communication skills covering both written and oral reports.	**Project thesis** to enable students to plan and execute an independent research study and to analyse appropriately and critically review scientific data	**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
4	Numeracy skills to evaluate experimental data.		
5	Work organisation and time management skills.	**Use of CAL and VLE resources** to enable students to develop essential skills in IT literacy	
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 Diploma level. Students will normally require a minimum 2.0 GPA in an approved Diploma 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 considered a IELTS 6.0 equi Students will normally be in employment in a relevant setting.

Programme Regulations	The Aston University General Regulations for Undergraduate programmes shall apply except in the following: **Condonment:** 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 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. A student who has gained the requisite number of credits (120 credits) within different blocks but who is unable, for whatever reason, to complete the Degree Programme, shall be awarded a Diploma of Higher Education. Furthermore a student unable to complete and pass the project component of the course (EA5PR1) but pass all other modules will be eligible for award of a Pass Degree following recommendation from the Award and Examination board.

General Regulations (http://www1.aston.ac.uk/registry/for-staff/regsandpolicies/general-regulations/) and the Regulations for the programme (above) take precedence over other information sources such as student handbooks if there is a conflict. If there is a conflict between General Regulations and Programme Regulations then General Regulations take precedence unless an exemption has been approved.

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 they take full advantage of the learning opportunities that are provided. **The individual modules included in the programme may differ from those listed in this programme specification as our programmes are continuously reviewed.** 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 specifications 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	C4	D1	D2	D3	D4	D5	D6	D7	D8
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	EA2BC2	•	•	•					•	•				•	•					•	•			•		
Metabolism	EA2ME1	•	•	•						•				•						•	•			•		
Block 3																										
Molecular Pathology	EA3PA1	•			•					•				•	•					•	•			•		
Molecular Biology	EA3MB1	•				•				•				•						•	•			•		
Endocrinology	EA6EN1	•	•							•				•	•					•	•			•		
Molecular Genetics	EA3MG1	•				•				•				•	•					•	•			•		
Block 4																										
Microbiology	EA4MI1							•		•				•						•	•			•		
Microbiology : Clinical & Food Microbiology	EA4FC1							•		•				•	•					•	•			•		
Block 5																										
Biomedical Research Project	EA5PR1									•	•	•	•	•		•	•	•	•			•	•		•	
Haematology and Transfusion Science	EA6HT1	•		•						•														•		
Biological Basis of Human Disease	EA5BD1									•	•	•	•	•	•	•	•	•	•		•	•	•	•	•	•
Applied and Molecular Biology	EA5MB2	•				•				•				•						•	•			•		
Block 6																										
Biomedical Research Project	EA5PR1									•	•	•	•	•		•	•	•	•			•	•		•	

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