

PROGRAMME SPECIFICATION

Section 1: Basic Data

Awarding institution/body	University of the West of England, Bristol	
Teaching institution	University of the West of England, Bristol	
Delivery Location(s)	University of the West of England, Bristol	
Faculty responsible for programme	Health & Life Sciences	
Modular Scheme title	School of Life Sciences	
Professional Statutory or Regulatory Body Links (type and dates)	Health Professions Council Institute of Biomedical Science, from 2007	
Highest award title	BSc (Hons) Applied Biomedical Science (Clinical)	
Default award title	BSc (Hons) Biomedical Science	
Interim award titles	BSc Biomedical Sciences Dip.HE Biomedical Sciences Cert.HE Biomedical Sciences	
UWE progression route		
Mode(s) of delivery	Sandwich	
Codes UCAS code C980	JACS code	
ISIS code	HESA code	
Relevant QAA subject benchmark statements	Biosciences & Biomedical Science	
On-going/valid until* (*delete as appropriate/insert end date)		
Valid from (insert date if appropriate)	1.1	
Original Validation Date:		
Latest Committee Approval	Date:	
1		

Version Code

For coding purposes, a numerical sequence (1, 2, 3 etc.) should be used for successive programme specifications where 2 replaces 1, and where there are no concurrent specifications. A sequential decimal numbering (1.1; 1.2, 2.1; 2.2 etc) should be used where there are different and concurrent programme specifications

Section 2: Educational aims of the programme

Section 3: Learning outcomes of the programme

ad understanding and litical ability and athem attributes in the following

The BSc (Hons) Applied Biomedical Science (clinical) programme is designed for students interested in taking a hands-on approach to studying the biology of disease. The programme is within our extensive Biomedical Science provision with an emphasis on the application of biomedical sciences in the Health Service. During the programme of study students will complete a Registration Training Portfolio, including a placement within an accredited NHS training laboratory, enabling them to apply to the Health Professions Council for registration as a Biomedical Scientist upon graduation.

The programme provides:

- opportunities for students from a wide range of backgrounds to develop competencies and realise their potential in a supportive and responsive teaching and learning environment
- added value for learners in their specialised, subject-specific knowledge and transferable skills
- a coherent and flexible programme of study with a variety of attendance modes
- graduates with a registered degree route suited to the pursuance of a career as a Biomedical Scientist in the NHS
- a programme responsive to feedback from students, external examiners and other stakeholders as part of quality programme management and enhancement
- appropriate facilities and resources to deliver a quality teaching and learning experience

The programme integrates a wide range of subjects in the study of the biology of disease. The combination of modules offered enables students to understand the science of the causes, diagnosis and treatment of disease while working at the cutting edge of biomedical sciences using state-of-the-art equipment and learning support material.

The award route provides opportunities for students to develop and demonstrate knowledge

and understanding, qualities, skills and other attributes in the following areas:		
A Knowledge and understanding		
Learning outcomes Teaching, Learning and Assessment Strategies		
A Knowledge and understanding of:	Teaching/learning methods and	
 demonstrate a broad knowledge base with specific areas of deeper understanding relevant to biomedical sciences 	strategies: Acquisition of knowledge is achieved through a variety of methods including lectures, practicals, seminars, tutorials, case studies project work, the training placement and	
2. understand the context of biomedical sciences and their application to practical problems	completion of the Registration Training Portfolio. Additional support is provided through E-	
3. demonstate an understanding of the contribution of research and scholarship	learning including Blackboard/UWEonline and the Profile website that supports	

	issued 11/08
in their specialist areas of biomedical sciences	placement learning.
	Throughout, the learner is encouraged to undertake independent reading both to supplement and consolidate what is being taught/learnt and to broaden their individual knowledge and understanding of the subject.
	Assessment: Testing of the knowledge base is through assessed laboratory tasks (2), coursework and examinations (1-3) as well as evidence supplied by the Registration Training Portfolio. Methods are specified in each module guide and are varied and designed to test the learning outcomes.

B Intellectual Skills

B Intellectual Skills	Teaching/learning methods and strategies
The ability to	Intellectual skills are developed through
1. Actively question and seek information	student-centred learning, written
2. Compare and contrast information from different sources	assignments, practical work, data handling and interpretation, tutorial and seminar work.
 Critically evaluate information against hypotheses in a range of research scenarios 	The research project is designed to permit students to demonstrate achievement of all the learning outcomes 1-5.
 Actively analyse and apply problem- solving strategies 	Assessment
5. Demonstrate independent and self- directed learning	A variety of assessment methods is employed. Some/all test a learner's ability to demonstrate skills 1-5 etc through examinations but assessment of the Registration Training Portfolio, coursework and practical project work including student oral presentation is the main vehicle for assessment of higher order skills

C Subject, Professional and Practical Skills

C Subject/Professional/Practical Skills The ability to	Teaching/learning methods and strategies
1. Critically observe, analyses and evaluate information arising from a wide range of sources	Skills 1-4 are acquired and developed in a coordinated and progressive way throughout the levels of the programme through
2. Apply practical approaches to the study of selective aspects of biomedical sciences and demonstrate an awareness of safety and good laboratory practice.	lectures, tutorials, case studies, practical and project work. At level 1 attention is focussed on the acquisition of basic skills and safe working practices through prescribed
 Communicate effectively scientifc data and concepts 	exercises, while at level 2 more advanced techniques and open ended practical work
4. Develop discipline-specific interests by specialising within the programme in relation to subject and/or career aspiration	are introduced. Professional skills are acquired through placement in an accredited NHS training laboratory between levels 2 and 3. At level 3 the research project is
 Demonstrate an understanding of the research process through the execution of a research project 	pivotal to the acquisition and consolidation of skills 1-5.
	Assessment
	Skills 1, 2, 3 and 4 are primarily assessed through practical reports, coursework and research projects – proposal, oral presentation and report. Additionally, skill 5 is assessed in the research project.

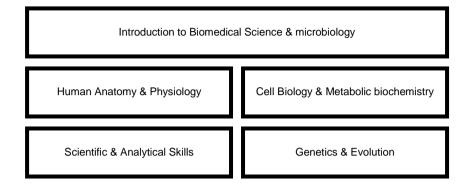
D Transferable Skills and other attributes

D Transferable skills and other attributes	Teaching/learning methods and strategies
The ability to 1. Communicate effectively and	Skills are developed throughout all the compulsory and core modules and in
appropriately using a variety of methodsCritically analyse data arising from various means of biological inquiry	particular the spine of experimental design, data analysis and research project modules. The skills are further developed throughout
 Undertake active learning and development Apply information management skills 	the programme via case studies, practicals, tutorials and coursework assignments and a placement in an accredited NHS laboratory.
 5. Practice effective time management 6. Evaluate performance of self and others 	Assessment
	A range of assessment strategies are used including essay, practical report, group work, case study, oral presentation, literature
	review and critique as well as the research project

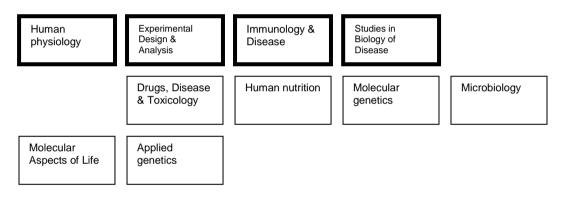
Section 4: Programme structure INTEGRATED ROUTE

BSc (Hons) Applied Biomedical Sciences (Clinical)

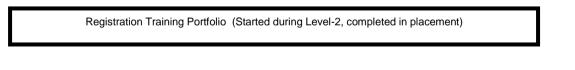
Level 1: one 40 credit and 4 20 credit modules



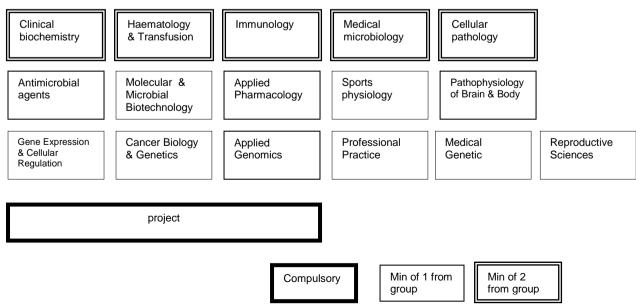
Level 2: 20 credit modules



1 year placement in an accredited NHS training laboratory



Level 3: 20 & 40 credit



ENTRY ↓	level 1	 USS JJP-40-1 Introduction to Biomedical Science & Microbiology USSJJL-20-1 Human Anatomy & Physiology USSJJM-20-1 Cell Biology & Biochemistry USSJR6-20-1 Scientific & Analytical Skills USSJJN-20-1 Genetics & Evolution 		Interim Awards: Cert HE • Credit requirements 120 (of which 100 are level 1 or above)
	level 2	 Compulsory modules USSJ4F-20-2 Human Physiology USSJV6-20-2 Studies in the Biology of Disease USSJ4E-20-2 Immunology & Disease USSJ4D-20-2 Experimental Design & Analysis Core modules USS JNB-20-2 Molecular Aspects of Life USS J4G-20-2 Microbiology 2 USSJ4G-20-2 Microbiology 2 USSJNA-20-2 Drugs & Disease & Toxicology USSJ4Y-20-2 Applied Genetics USSJ4C-20-2 Molecular Genetics USSJ6S-20-2 Human Nutrition 	Optional modules	Interim Awards: Dip HE • Credit requirements: 240 (of which not less than 100 are level 2 or above and 120 are at level 1 or above)

Year out	The sandwich year allows students to gain valuable work experience and training in an accredited NHS hospital pathology and National Blood Services. The University has an arrangement with the NHS (South West Region) to sponsor selected students as salaried trainees within hospital pathology departments through out the South West, from Cornwall to Gloucestershire. Students accepting these sponsorships will commence a formal course of training to enable students to apply to the Health Professions Council for registration as a Biomedical Scientist after graduation. Students applying for placements in the NHS will be subject to a CRB check and compliance with the service's health requirements Optional modules • USSJFL-20-3 Professional Practice Module			
level 3	Compulsory modules USSJ73-40-3 Project 	Optional modules •	 Prerequisite requirements Minimum credit/module requirements other 	

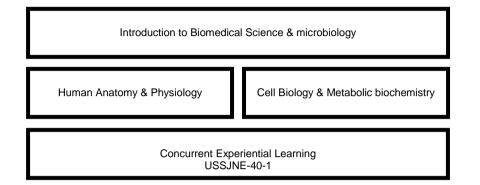
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Core modules	Awards:
	Applied Biomedical
Minimum of 2 from	Science (Clinical)
 USSJJT-20-3 	Degree with
Haematology &	Honours
Transfusion	
 USSJ5E-20-3 	Credit requirements
Clinical Biochemistry	 360 (of which not
 USSJ5D-20-3 	less than 100 are
Immunology	level 3 or above, and
 USSJN3-20-3 	100 are at level 2 or
Medical	above, and 140 are
Microbiology	level 1 or above)
 USSJ5F-20-3 	
	Professional
Cellular Pathology	requirements
Minimum of 4 frame	Successful completion
Minimum of 1 from	of the Registration
USSJFL-20-3	Training Portfolio
Professional Drastics Maskels	rial ing r ortione
Practice Module	
• USSJ57-20-3	Awards:
Sports Physiology	Biomedical Science
• USSJ5S-20-3	Degree with
Antimicrobial Agents	Honours
USSJJR-20-3	Tionodio
Applied	Credit requirements
Pharmacology	360 (of which not less
 USSJJQ-20-3 	than 100 are level 3 or
Pathophysiology of	above, and 100 are at
Brain & Body	level 2 or above, and
• USSJJU-20-3	140 are level 1 or
Cancer Biology &	above)
Genetics	
 USSJJV-20-3 	Awards:
Applied Genomics	Biomedical Science
 USSJJW-20-3 	Degree
Molecular &	
Microbial	Credit requirements
Biotechnology	300 (of which not less
• USSJJS-20-3	than 60 are level 3 or
Gene Expression &	above, and 100 are at
Cellular Regulation	level 2 or above, and
 USSJ5V-20-3 	120 are level 1 or
Medical Genetics	above)
 USSJSB-20-3 	,
Reproductive	
Sciences	

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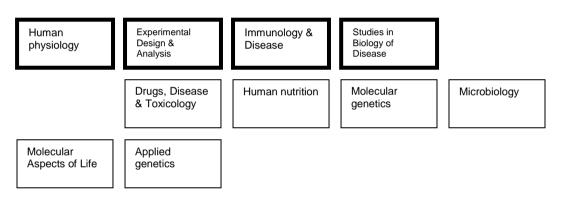
Section 4: Programme structure BLOCK-RELEASE ROUTE

BSc (Hons) Applied Biomedical Sciences (Clinical). Block Release Route

Level 1: two 40 credit and 4 20 credit modules

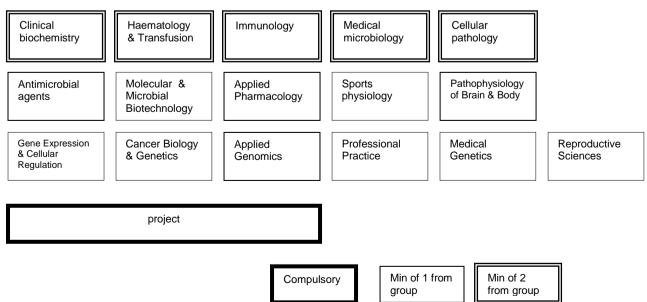


Level 2: 20 credit modules



Registration Training Portfolio (Started during Level-2, completed during course of degree)

Level 3: 20 & 40 credit



ENTRY ↓	level 1	 Compulsory modules USS JJP-40-1 Introduction to Biomedical Science & Microbiology USSJJM-20-1 Cell Biology & Biochemistry USSJJN-20-1 Genetics & Evolution USSJJNE-40-1 Concurrent Experiential Learning 		Interim Awards: Cert HE • Credit requirements 120 (of which 100 are level 1 or above)
	level 2	 Compulsory modules USSJ4F-20-2 Human Physiology USSJV6-20-2 Studies in the Biology of Disease USSJ4E-20-2 Immunology & Disease USSJ4D-20-2 Experimental Design & Analysis Core modules USS JNB-20-2 Molecular Aspects of Life USS J4G-20-2 Microbiology 2 USSJNA-20-2 Drugs & Disease & Toxicology USSJ4Y-20-2 Applied Genetics USSJ4C-20-2 Molecular Genetics USSJ4C-20-2 Molecular Genetics USSJ4C-20-2 Molecular Genetics USSJ4C-20-2 Human Nutrition 	Optional modules	Interim Awards: Dip HE • Credit requirements: 240 (of which not less than 100 are level 2 or above and 120 are at level 1 or above)
	Year out	Not applicable since stude biomedical scientists withi	ents taking this route are alr n the NHS.	eady working as trainee

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	Compulsory modulesUSSJ73-40-3 Project	Optional modules •	Prerequisite requirements • Minimum credit/module requirements
	Core modules		Awards:
	Minimum of 2 from • USSJJT-20-3 Haematology & Transfusion		 Applied Biomedical Science (Clinical) Degree with Honours
	 USSJ5E-20-3 Clinical Biochemistry USSJ5D-20-3 Immunology USSJN3-20-3 Medical Microbiology 		 Credit requirements 360 (of which not less than 100 are level 3 or above, and 100 are at level 2 or above, and 140 are level 1 or above)
	USSJ5F-20-3 Cellular Pathology		Professional requirements
<u>j</u>] 3	 Minimum of 1 from USSJFL-20-3 Professional Practice Module 		Successful completion of the Registration Training Portfolio
level	 USSJ57-20-3 Sports Physiology USSJ5S-20-3 Antimicrobial Agents USSJJR-20-3 		 Awards: Biomedical Science Degree with Honours
	Applied Pharmacology • USSJJQ-20-3 Pathophysiology of Brain & Body		Credit requirements 360 (of which not less than 100 are level 3 or above, and 100 are at
	USSJJU-20-3 Cancer Biology & Genetics		level 2 or above, and 140 are level 1 or above)
	 USSJJV-20-3 Applied Genomics USSJJW-20-3 Molecular & 		Awards:Biomedical Science Degree
	Microbial Biotechnology USSJJS-20-3 Gene Expression &		Credit requirements 300 (of which not less than 60 are level 3 or
	 Cellular Regulation USSJ5V-20-3 Medical Genetics 		above, and 100 are at level 2 or above, and 120 are level 1 or above)
	USSJSB-20-3 Reproductive Sciences		

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Section 5: Entry requirements

Admission into the biomedical programme will be administered within the undergraduate programmes in biosciences. Standard offers for entry to the programme are in the range 180-220 tariff points.

Successful application to the programme must meet one of the following minimum requirements:

- GCE A level in two science subjects to include Chemistry or a Biology subject, plus grade C or above in three GCSE subjects, to include Maths and English unless compensated for elsewhere
- Registrant Biomedical Scientists must be able to communicate in English to the standard equivalent to level 7 of the International English Language Testing System, with no element below 6.5.
- National Certificate or Diploma in an appropriate subject such as biological sciences
- Pass in a recognised Access or Foundation course.

Additionally, applicants may be admitted to the programme provided they meet one of the following requirements and can demonstrate to the Faculty attainment equivalent to the GCE A level and GCSE subject areas specified above:

- The Advanced General National Vocational Qualification (AGNVQ) or Advanced General Scottish Vocational Qualification (AGSVQ)
- The Irish Leaving Certificate with Grade C or above in two subjects at Higher level and three subjects at Ordinary level
- The Scottish Leaving Certificate of Education with grade C in three subjects at Higher and grade 3 or above in two subjects at Standard grade or Intermediate 12
- National Vocational Qualifications or Scottish Vocational Qualifications at level III
- The European Baccalaureate
- The International Baccalaureate
- Compensation through Accreditation of Prior (Experiential) Learning
- Other European or International qualifications that the University considers to be of equivalence to the above.

Section 6: Assessment Regulations

Approved to University Academic Regulations and Procedures 2008

Section 7: Student learning: distinctive features and support

A Student Handbook is provided, during Induction to year 1, which includes information on the Faculty, the University, its regulations and procedures. Subsequently, at each level, induction is provided to enable students to plan their study of modules as effectively as possible a patterned calendar of assessments across the academic year is produced. Detailed information is distributed in guides at the start of each module.

Students are supported during their time at UWE by academic tutors and their student adviser. The 'Graduate Development Programme', a new initiative being developed as part of the Student Experience programme in response to the needs of students, is a universitywide learning opportunity for students to support their learning, offer guidance for their Personal Development Planning, and enhance their employability. Students will meet programme-specific tutors on a weekly basis throughout their first year and then on a fortnightly basis in their 2nd and final year. For those students who elect to undertake a placement, a placement tutor makes regular, planned visits to provide support and to liaise with supervisors and assessors. Students on placement may take an optional Professional Practice Module which is managed through an innovative web-based interface designed to support, capture and reward placement learning. The Placements Support Team oversees the optional placement year, as described in section 4. For all students, access to academic staff and the student advisor is by student e-mail or by personal access, and central University Centre for Student Affairs (CSA) provides support and guidance to students on a wide range of issues. The library at Frenchay campus provides an extensive range of literature for the programme. Students have 24-hour access to computers, and IT support services are available within the Faculty of Applied Sciences and from the University's Computing Helpdesk.

The Faculty has a longstanding investment in web-based support for teaching and learning; the provision of supplementary material and access to diagnostic testing of understanding and knowledge is now available through UWE's VLE, UWEonline (Blackboard). The Faculty has a well-equipped range of general laboratories, specialised scientific equipment and specialist facilities appropriate for teaching and research in biosciences, biomedicine, psychology and chemical and physical sciences. Support for laboratory-based scientific inquiry, enabled by this provision, is enhanced by the core research methods modules that occur within each year. Students develop a range of key skills required of a scientist, including literature searches, critical review, research methodology, problem-solving, and IT and communication skills.

Professional Accreditation

The programme is accredited by the Institute of Biomedical Sciences (IBMS) students graduating with Honours are entitled to claim Licentiate Membership of the Institute. Those students who have completed a successful sandwich placement in an accredited training laboratory, or who subsequently undertake a satisfactory period of specific training enabling then to complete a Registration Training Portfolio are eligible to apply to the Health Professions Council (HPC) for registration as a Biomedical Scientist

Section 8 Reference points/benchmarks

The mission and vision of the University of the West of England is to

'advance an inclusive, civilised and democratic society and its enrichment through education, consultancy and public service'

The aims of the Faculty of Applied Sciences and the undergraduate programme in Biomedical Sciences are entirely consistent with this and are firmly set within this context.

- Subject benchmarks (QAA Unit Biomedical Science) The BSc (Hons) Applied Biomedical Science programme fully supports the Biomedical Science benchmark with an inter-disciplinary approach. There is a carefully graded level of choice in the programme. At level 1, all modules are compulsory supporting a foundation of biology of disease, biochemistry, microbiology, genetics and analytical skills. At level 2, there is an element of choice permitted where students can begin to concentrate on areas of interest to their future careers. Modules build on the level 1 foundations and include Immunology & Disease, Microbiology, Genetics, and Physiology. In the final year, there is a large element of module choice including the specialisms; Cellular Pathology, Clinical Biochemistry, Applied Immunology, Haematology & Transfusion and Medical Microbiology.
- University teaching and learning policies: The staff who support the programme come from the Schools of Biomedical, Human & Analytical Science and have specific expertise in their subject area. The modules are strongly underpinned by the research expertise of the programme team. The quality, management and enhancement (QME) of the provision is underpinned by staff development, including research. Staff development includes personal review via the appraisal and development scheme, in-house training and external fora. The Faculty is supportive of staff development; each member of staff may call upon funds to support attendance at conferences etc. New academic staff undertake a one-year Professional Development PGCert programme, which is accredited by the Higher Education Academy (HEA). The University strongly endorses membership of the HEA and supports staff at all levels of development to attain membership.
- staff research projects: The majority of staff involved with the programmes are research active and the Faculty strongly supports the research activities, particularly within the Centre for Research in Biomedicine (CRIB), and are submitting in RAE2008 in UoA12 – Allied Health Professions and Studies.
- employer interaction/feedback: Ongoing and close liaison with employers of Biomedical Scientists is extremely important and is achieved in following ways;

Informal links

A culture of two-way communication exists and is encouraged between university academic staff and employers. UWE has representation on the local IBMS Branch Committee and several of the associated discussion groups. These and many other opportunities for sharing ideas and views exist and are actively used to the advantage of all parties.

Formal links.

- Joint Training Officer's Committee;

The Joint Training Officer's Committee's role is to monitor and advise on the operation of the CPA/IBMS accredited training places in accordance with agreed standards and policies. In addition, this committee provides a forum for employers views on the undergraduate provision and discussion pertaining to possible future degree programmes.

- Biomedical Science Advisory Committee;

The Biomedical Sciences Advisory Group (BMSAG) acts as a source of expert opinion in the area of Biomedical Sciences employment. In particular the group offers comment on

the content and operation of all programmes in Biomedical Sciences at UWE as part of our remit to ensure that the education UWE offers is fully up to date, effective and is designed to prepare students for employment.

This specification provides a concise summary of the main features of the programme and the learning outcomes that a typical 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 of individual modules can be found in module specifications. These are available on the University Intranet.

Programme monitoring and review may lead to changes to approved programmes. There may be a time lag between approval of such changes/modifications and their incorporation into an authorised programme specification. Enquiries about any recent changes to the programme made since this specification was authorised should be made to the relevant Faculty Academic Registrar.