

ACADEMIC SERVICES

PROGRAMME SPECIFICATION

Part 1: Basic Data		
Awarding Institution	University of the West of England, Bristol	
Teaching Institution	University of the West of England, Bristol	
Delivery Location	Frenchay and Glenside Campuses	
Faculty responsible for programme	Health and Applied Sciences	
Department responsible for programme	Biological, Biomedical and Analytical Science (BBAS)	
Modular Scheme Title	Any faculty modular scheme linking named programmes	
Professional Statutory or Regulatory Body Links	Institute of Biomedical Science (from 2007); Health and Care Professions Council;	
Highest Award Title	BSc (Honours) Applied Biomedical Science (Clinical)	
Default Award Title	BSc (Honours) Biomedical Science	
Fall-back Award Title		
Interim Award Titles	BSc Biomedical Science Dip HE Biomedical Science Cert HE Biomedical Science	
UWE Progression Route	N/A	
Mode(s) of Delivery	Sandwich	
Codes	UCAS: C980	JACS: C980
	ISIS2:	HESA:
Relevant QAA Subject Benchmark Statements	Bioscience and Biomedical Science 2007	
CAP Approval Date	28/03/2014	
Valid from	September 2014	
Valid until Date	September 2015	
Version	2	

Part 2: Educational Aims of the Programme

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 and provision of a relevant education and practical skills that affords employment opportunities. As a variant of the full-time Biomedical Science Programme,

Part 2: Educational Aims of the Programme

“Applied” has emphasis on the application of biomedical sciences within the National Health Service or via other suitable placement providers in the UK or overseas. During the programme, the students will complete a Registration Training Portfolio facilitated via a significant placement within an accredited NHS training laboratory. The Programme enables students to apply for Health Care Professions Council registration as a Biomedical Scientist.

The programme provides:

- opportunities for students from a wide range of backgrounds to develop 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 including a sandwich degree option.
- graduates with an accredited degree route suited to the pursuance of a career as a Biomedical Scientist following training at an independently-sourced accredited NHS laboratory, completion of a Registration Training Portfolio, and approval by the Health and Care Professions Council.
- 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.

More specific aims:

The programme integrates a wide range of bioscience 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 modules are research-informed and where possible led by the research and professional experience of staff.

The programme design at the more advanced levels provides students with core bioscience subjects (e.g. microbiology, immunology etc) but with the opportunity to choose from specialist themes to develop their own interests through years 2 and 3.

Teaching, learning and assessment is enhanced by the use of technology, for example, online-assessment and feedback, and the use of open educational resources (and other in-house resources) in flipped classroom scenarios to support practical teaching.

Programme requirements for the purposes of the Higher Education Achievement Record (HEAR)

Applied Biomedical Science (BSc Hons) is accredited by the Institute of Biomedical Science and aligns to the Modernising Scientific Careers framework as a training route for NHS scientists, should the student wish to select that career pathway. This course, with is a four-year “sandwich” variant of Biomedical Science offers flexibility of choice combining a research-led approach with advanced subjects aligning to departmental research interests. Students gain a breadth of practical competencies alongside insight into cutting-edge research which they can enhance in a year-long placement position. This degree creates independent thinkers, graduates with outstanding analytical and problem-solving skills, and equips them for a range of scientific careers.

Part 3: Learning Outcomes of the Programme (Level 3)

(B) Intellectual Skills													
Students will develop the ability to:													
Actively question and seek relevant information	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Compare and contrast information from different sources online and offline	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Critically evaluate information against hypotheses in a range of research scenarios	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Actively analyse and apply problem-solving strategies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Demonstrate independent self-directed learning, and skills for life-long learning	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(C) Subject/Professional/Practical Skills													
Students will develop the ability to:													
Critically observe, analyse and evaluate information arising from a wide range of sources	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Apply practical approaches to studying biomedical science, and be aware of research governance including safety and good laboratory practice	<input type="checkbox"/>		<input type="checkbox"/>					<input type="checkbox"/>					
Communicate effectively scientific data and concepts in written and oral form	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Develop discipline-specific interests by specialising within the programme in relation to subject and/or career aspiration	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Demonstrate an understanding of the research process through the successful execution of an independent research project	<input type="checkbox"/>												
(D) Transferable skills and other attributes													
Students will develop the ability to:													
Communicate effectively and appropriately using a variety of methods	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Critically and statistically present and analyse data arising from various means of inquiry	<input type="checkbox"/>		<input type="checkbox"/>					<input type="checkbox"/>					
Undertake active learning and development	<input type="checkbox"/>												
Apply information management skills	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Practice effective time management and become independent and lifelong learners	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Evaluate performance of self and others through reflective practice and observation	<input type="checkbox"/>												<input type="checkbox"/>

Part 4: Student Learning and Student Support

Teaching and learning strategies to enable learning outcomes to be achieved and demonstrated

Professional Accreditation

The programme is currently accredited by the Institute of Biomedical Sciences (IBMS). Students graduating with Honours are entitled to claim Licentiate Membership of the Institute. Those graduates who subsequently undertake a satisfactory period of specific training – for example during a “sandwich” year or integrated in any other way – and are able to complete a Registration Training Portfolio are eligible to apply to the Health and Care Professions Council (HCPC) for registration as a Biomedical Scientist.

Laboratory resources

The Faculty has a well-equipped range of general laboratories, specialised scientific equipment and specialist facilities appropriate for teaching and research in biosciences and biomedicine. Support for laboratory-based scientific inquiry is enhanced by the core research methods modules (Biomedical Skills; Experimental Design & Analysis; Research Experimental Project) that occur within each year. Students develop a range of key skills required of a scientist, including systematic literature searches, critical review, research methodology and design, statistical and data handling, problem-solving, and IT.

Learning and teaching strategy

At UWE Bristol, the learning and teaching policy requires a minimum average of 12 hours per week contact time throughout the full undergraduate programme. This includes a range of face-to-face activities, in addition to online learning and independent learning that enable the learning outcomes to be achieved and demonstrated. The following activities take place:

- 1) Scheduled learning - lectures, seminars, tutorials, project supervision, practical classes. Activities may include field trips and external visits, or work based learning on short-term internships or longer-term placements. Scheduled sessions may vary slightly depending on the module choices made.
- 2) Independent learning – students are provided with essential reading and online supplementary materials, and are supported in their academic development through formative assessment, assignment preparation and completion. Students are encouraged to develop their scientific interests by attending departmental research seminars and external events.
- 3) Placement learning – students may experience a UWE internship, vocational placement or year-long placement (national or international).

Supporting student transition

New students are supported by a series of initial events including a week long induction, timetabled introductions to the programme and modules, and each is supported throughout university by a personal tutor (Academic Personal Tutor APT scheme in year 1 and 2; project supervisor in the Graduate Development Programme GDP scheme in year 3).

Part 4: Student Learning and Student Support

All students are provided with essential and extra-curricular programme and university-wide information through a Blackboard Programme Shell. Through this students access their Student Handbooks which provides an introduction to the University and Faculty, alongside all the relevant support services, regulations and procedures. At each level, induction is provided to enable students to plan their study of modules as effectively as possible. Assessment maps showing all deadlines across the academic year are produced. In addition to the overarching Student Handbook, students receive inductions and handbooks at the start of the year relevant to each module.

Employability and personal development

Students are supported during their time at UWE by academic personal tutors (APT). The 'APT' is a timetabled series of tutorials leading students through the development of basic academic skills (e.g. learning how to be a successful student), and also encompassing employability. Students meet tutors fortnightly in levels 1 and 2 as a group, and also individually for one-to-one sessions.

Employability skills and opportunities are developed from day 1, and UWE provides scope for students to apply for voluntary activities, paid internships and external placements. In this programme "Applied Biomedical Science", students will undertake a health service placement in their third year as a sandwich degree (or have achieved a significant amount of work-based experience sufficient to complete their IBMS portfolio). In either scenario, a placement tutor is allocated and makes planned visits to provide support and to liaise with work supervisors.

Students on placement may take an optional Professional Practice Module which is managed through our bespoke online system called "Profile", an innovative web-based interface designed to support, capture and reward placement learning. The Placements Learning Unit oversees the optional placement year.

The University Central Careers Service provides specialist subject advice, offering one-to-one sessions and regular drop in sessions. Enhancement opportunities such as becoming a student ambassador, voluntary work and engaging with enterprise activity are available to national and international students alike.

Students with special needs

In addition to a personal tutor who is a student's first port of call, there is the university Centre for Student Affairs (CSA) that supports and guides on a range of non-curricular issues including welfare, disability and psychological support and counselling. Students with disabilities or learning differences are needs assessed, and any specific learning support measures can be implemented e.g. in the classroom or examinations, and through support of the programme team.

Library and technology enhanced learning

The library at Frenchay campus provides an extensive range of literature for the programme, and students have support from a subject-specific librarian. Students have 24-hour access to computers, and IT support services are available from the University's Computing Helpdesk.

Part 4: Student Learning and Student Support

Description of any Distinctive Features

Flexibility of study!

Applied Biomedical Science provides students with the flexibility to enhance their theoretical understanding of bioscience and their laboratory skills by undertaking work-based study. This can be in the form of a year-long “sandwich” option or by making the most of other opportunities.

Research and innovation

The distinctiveness of Biomedical Science from the Healthcare Science (integrated placement) provision is that it is research-led rather than practitioner-led, with module options based around departmental research themes in years 2 and 3. The Experimental Research Project module gives students the opportunity to engage in a research project working alongside active researchers and post-graduate students in areas including medical genetics, infection and immunity, pharmacology, haematology, molecular genetics, cell signaling and cancer biology/cell pathology. In addition, students can attend the Centre for Research in Bioscience (CRIB) seminars and research conference events, as well as other research events that attract external speakers. For many final year modules, aspects are taught by external experts in the field.

The Faculty has a longstanding investment in web-based support for teaching and learning with a learning technologist team working alongside academic staff. Supplementary learning resources and access to formative quizzes so students can test their knowledge and understanding is available through Blackboard.

Part 5: Assessment

Approved to [University Regulations and Procedures](#)

Assessment Strategy

Assessment strategy to enable the learning outcomes to be achieved and demonstrated:

One of the four ambitions of the new UWE 2020 Strategy is to become the best university for:

“Professionally recognised and practice-oriented programmes, which contribute to an outstanding learning experience and generate excellent graduate employment opportunities and outcomes for all students”.
(<http://www1.uwe.ac.uk/aboutus/visionandmission/strategy.aspx>).

The Biomedical Science is a professionally accredited and research-oriented programme, and the range and types of assessments underpin the personal and professional skills of the science employment sector. The ethos underlying the programme is to generate good quality researchers, and many so assessments focus on developing student scientific writing skills, and/or involve data and statistical analysis, usually writing up data acquired in laboratory practicals, or based on researcher’s own data.

Part 5: Assessment

The assessment strategy maps with the UWE regulations, and the assessment outcomes ensure students are consistent with the awards of Certificate, Diploma or Degree in accordance with the QAA Framework for Higher Education Qualifications. Graduates will achieve the personal and professional skills and underpinning knowledge listed below.

The subject requirements as framed by the IBMS and QAA Subject Benchmarks (Biomedical Science and Bioscience) build from years 1 to 3, from a basic foundation in bioscience knowledge and analytical skills, through to years 3 with more specialist choices at an advanced level, informed by the research interests of staff (e.g. Cancer Biology, Infection and Immunity, Intracellular signalling/Alzheimer's Disease/Regenerative medicine) as well as the IBMS specialisms (Cellular Pathology, Clinical Biochemistry, Immunology, Haematology & Transfusion and Medical Microbiology).

Alignment of assessment strategy with learning outcomes is as follows:

Subject knowledge and understanding:

Gained through face-to-face and independent learning opportunities, subject knowledge will be assessed through coursework, examinations and laboratory tasks. Activities include research data analysis; desk top research, scientific writing, oral and poster communication. Methods are specified in each module guide and are varied and designed to test the learning outcomes.

Intellectual skills and ability:

Through a range of formative and summative assessment opportunities, the student develops intellectual skills demonstrating subject and research understanding at level 1 building up to critical thinking and problem solving at level 3. The level of independence and reflective practice also advances from year to year. The research project is designed to permit students to demonstrate achievement of all the learning outcomes 1-5 (part 3).

Subject, Professional and Practical Skills

To critically observe, apply approaches, communicate and demonstrate broader scientific interests, these skills are taught progressively throughout the levels of the programme. Basic skills (literacy, numeracy, safe laboratory practices) are assessed through prescribed exercises. At level 2, open ended practical work is introduced. At level 3, in depth assessments and the research project is pivotal to the acquisition and consolidation of these 5 skills. Assessments mirror this at level 1 being more task based through practical reports and coursework; with more individual elements introduced at level 2 with oral and poster presentations, and at level 3 with dissemination of research outputs through a dissertation and oral poster defence.

Transferable Skills and other attributes

Students develop transferable skills (independent learning, IT, time management, literacy, numeracy and reflective practice) within each module and explicitly through skills modules each year. Through formative assessment, students develop skills of the reflective practitioner, and coursework feedback builds confidence and independent learning. Assessments include individual activities – essays, case studies, oral presentations, or can be group work – practicals, presentations. IT skills are honed through online assessment and data analysis tasks. All are honed through the final year independent research project, where students are encouraged to manage their own time and objectives.

Part 5: Assessment

Assessment Map

The programme encompasses a range of assessment methods detailed in the following assessment map:

Assessment Map for Applied Biomedical Science

		Unseen Written Exam	In-class Written Test	Practical Skills Assessment	Oral assessment and/or presentation	Written Assignment (essay or case study)	Written Assignment (data and statistics)	Dissertation	Portfolio
	USSJ49-60-1 Concurrent Experiential Learning				A (70)	B (10, 10, 10)			
	USSKA4-30-1 Cell Biol, Biochem & Genetics	A (40)				B (30)	B (30)		
	USSKA7-30-1 Pathophysiology of Disease	A (40)			B (45)	B (15)			
Compulsory Modules Level 2	USSKAR-30-2 Practice & Comms of Science	A (50)			B (25)		B (25)		
	USSKAS-30-2 Physiological & Immunological Systems	A (50) B (50)							
	USSKAT-30-2 Studies in the Biology of Disease	A (50)				B (25)	B (25)		
Compulsory Modules Level 3	USSK5K-30-3 Research Dissertation Project OR USSKBC-30-3 Research Experimental Project				A (20)	A (10)		A (70)	
	USSKBH-30-3 Medical Genetics	A (60)				B (20, 20)			
	USSKBJ-30-3 Medical Microbiology	A (60)				B (10, 30)			
	USSKBK-30-3: Haematology	A (60)			B (20)	B (20)			
	USSKBL-30-3 Clinical Biochemistry	A (60)			B (20)	B (20)			
	USSKBM-30-3 Cellular Pathology & Oncology	A (60)			B (20)		B (20)		
	USSKBN-30-3 Immunology	A (60)			B (32)	B (8)			
	USSKB3-15-2 Drugs & Disease	A (50)			B (25)	B (25)			
Optional Modules Level 2	USSKB4-15-2 Cell Signalling	A (50)				B (50)			
	USSKB5-15-2 Medicinal Chemistry	A (50)							B (50)
	USSKB6-15-2 Microbiology	A (50)				B (37.5)	B (12.5)		
	USSKB7-15-2 Molecular Genetics	A (50)				B (50)			
	USSK57-15-3 Professional Practice in Applied Science								A (P/F)
Optional Modules Level 3	USSKCE-15-3 Science Communication					A (50,50)			

Part 5: Assessment

USSKBF-30-3 Genomic Technologies	A (60)			B (20)	B (20)		
USSKCF-15-3 Scientific Frontiers and Enterprise				A (40)			B (60)
USSKCA-15-3 Neuropharmacology	A (60)			B (40)			
USSKWB-15-3 Pathophysiology	A (60)			B (40)			
USSKBY-15-3 Antimicrobial Agents	A (60)			B (40)			
USSKBX-15-3 Pharmacology & Toxicology	A (60)						B (40)

*Assessment should be shown in terms of either **Written Exams**, **Practical exams**, or **Coursework** as indicated by the colour coding above.

Part 6: Programme Structure

This structure diagram demonstrates the student journey from Entry through to Graduation for a typical **full time student**, including:
 level and credit requirements
 interim award requirements
 module diet, including compulsory and optional modules

ENTRY					
	Year 1	Compulsory Modules	Optional Modules	Interim Awards <ul style="list-style-type: none"> Cert HE Biomedical Science Credit requirements: 120	
		USSKA4-30-1 Cell Biology, Biochemistry & Genetics			
		USSKA7-30-1 Pathophysiology of Disease			
			USSJ49-60-1 Concurrent Experiential Learning		
	Year 2	Compulsory Modules	Optional Modules *2 x 15 credit modules	Interim Awards <ul style="list-style-type: none"> Dip HE Biomedical Science Credit requirements: 240 (of which at least 100 are at level 2)	
		USSKAR-30-2 Practice and Communication of Science	USSKB3-15-2 Drugs & Disease		
		USSKAS-30-2 Physiological & Immunological Systems	USSKB4-15-2 Cell Signalling		
		USSKAT-30-2 Studies in the Biology of Disease	USSKB5-15-2 Medicinal Chemistry		
			USSKB6-15-2 Microbiology		
			USSKB7-15-2 Molecular Genetics		
	Year Out: an optional on work placement is arranged by the student in a laboratory of their choice. Work maps to the Concurrent Experiential Learning module.				
	Year 3	Compulsory Modules *1 project module *2 specialist modules	Optional Modules *30 credits from remaining specialist modules or optional modules	Interim Awards	

↓	USSK5K-30-3 Research Dissertation Project OR USSKBC-30-3 Research Experimental Project	USSK57-15-3 Professional Practice in Applied Science	<ul style="list-style-type: none"> BSc Biomedical Science Credit requirements: 300 (at least 60 credits at level 3) BSc (Hons) Biomedical Science Credit requirements: 360 (at least 200 credits at level 2 or above; at least 100 at level 3) <p>Target/Highest Award:</p> <ul style="list-style-type: none"> BSc (Hons) Applied Biomedical Science (Clinical) Credit requirements: 360 (at least 200 credits at level 2 or above; at least 100 at level 3) <p>Professional requirements: Successful completion of the Registration Training Portfolio</p>
	USSKBH-30-3 Medical Genetics	USSKCE-15-3 Science Communication	
	USSKBJ-30-3 Medical Microbiology	USSKBF-30-3 Module name: Genomic Technologies	
	USSKBK-30-3 Haematology	USSKCF-15-3 Scientific Frontiers and Enterprise	
	USSKBL-30-3 Clinical Biochemistry	USSKCA-15-3 Neuropharmacology	
	USSKBM-30-3 Cellular Pathology & Oncology	USSKBW-15-3 Pathophysiology	
	USSKBN-30-3 Immunology	USSKBY-15-3 Antimicrobial Agents	
		USSKBX-15-3 Pharmacology & Toxicology	

Part time:

The following structure diagram demonstrates the student journey from Entry through to Graduation for a typical **part time student**.

Part 7: Entry Requirements

Admission into the Biomedical Sciences programme will be administered within the undergraduate programmes in biosciences. Standard offers for entry to the programme are 320 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 Mathematics, English Language and Double Science unless compensated for elsewhere.

Part 7: Entry Requirements

- 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.

Part 8: Reference Points and Benchmarks

The aim of the Department of BBAS is to evolve a portfolio of programmes that align with the UWE 2020 Strategy that includes:

“Connecting and working with our local and regional economy, businesses and communities and international partners to advance knowledge, and to advance the health, sustainability and prosperity of our locality and region”.

“Being digitally advanced, agile and responsive in the way we work, embracing and leading change to create new sustainable opportunities”.

Biomedical Science connects with external partners including business, the National Health Service and communities, and to achieve high quality and outstanding delivery, our programmes are aligned with quality and professional frameworks.

Qualification descriptors used in the QAA Framework for Higher Education Qualifications (2008)

The learning outcomes for the programme have been developed with reference to the qualification descriptors used in the QAA Framework for HE Qualifications. The learning outcomes for modules at level one and level two have been considered to be consistent with the award of a Certificate in Higher Education and a Diploma in Higher Education, respectively. Graduates of the award will have acquired the knowledge and understanding, and gained the intellectual, subject, professional, practical and transferable skills listed in previous sections.

QAA subject benchmarks

Our curricula and skills map to the QAA subject benchmark statements for **Biomedical**

Part 8: Reference Points and Benchmarks

Science and Bioscience in order to embrace a broad range of scientific and medical knowledge, alongside the research and practical skills that are expected of a graduate in order to become a competent IBMS-accredited scientist.

The Basic Knowledge sub-headings within the Biomedicine benchmark are listed as human anatomy and physiology, cell biology, biochemistry, genetics, molecular biology, immunology and microbiology, all of which map to modules in this programme. This provides students with an integrated knowledge of the human body at a physiological, cellular, molecular and genetic level, in both health and disease. At level 1 modules provide a foundation of generic biomedical content including scientific and analytical skills, biology of disease, biochemistry, microbiology, and genetics. At level 2, building on core subjects, there is the introduction of choice around research themes, so that students can develop research interests aligned to their career aspirations.

As well as achieving the benchmarking goals of understanding a “multidisciplinary approach to the study of human disease”, they also develop “an awareness of the current methods used for the laboratory investigation, diagnosis and monitoring of disease...” The level of choice extends in the final year, with more advanced modules aligned to the research themes, alongside the core IBMS specialisms (Cellular Pathology, Clinical Biochemistry, Immunology, Haematology and Transfusion and Medical Microbiology).

The Bioscience benchmark statements also map to our programme and are “a family of methods and disciplines grouped around the investigation of life processes”; “practical and experimental subjects”. Our programme includes basic organism structure and diversity, as well as social and environmental aspects of science, with a toxicology theme, and final year module on science and community / communication. Reflecting the Bioscience benchmarks for numeracy and IT, our programme includes bioinformatics and statistics. The benchmark typical standard includes students being able to: “describe and critically evaluate the evidence for the mechanisms of life processes”; “interpret the significance of internal and external influences on the integration of metabolism for survival and health”, “describe and analyse patterns of inheritance and complex genetic interactions”; all these areas map to compulsory modules within the programme.

University teaching and learning policies

In line with the University’s teaching and learning policies, this programme takes a student-centred approach to learning by allowing students to take control of aspects of their learning and providing a learning environment that stimulates active participation and engagement in the learning process. The programme seeks to create an environment that stimulates students to take responsibility for aspects of their learning, while lecturers facilitate that learning. The module learning outcomes are designed to ensure that students meet the overall programme learning outcomes by completion.

A variety of assessment methods is incorporated within the programme to cater for a diversity of student strengths and abilities. The course team recognises the importance of both formative and summative assessment activity as an integral part of the learning and teaching process. All assessments comply with the University Assessment Policy, Academic Regulations and Procedures and the Work based Learning Policy (<http://www1.uwe.ac.uk/aboutus/policies>).

Research themes underpinning the programme

Academic staff involved in the Biomedical Science programme are from a diversity of backgrounds including industry, healthcare and research. Around the core IBMS biomedical subject specialisms are six research themes that reflect staff strengths, be they core IBMS or broader. At level 2 and 3 the modules strongly underpinned by the research expertise of the

Part 8: Reference Points and Benchmarks

team. The majority of staff involved are research active and the Faculty strongly supports the research activities, particularly within the Centre for Research in Biosciences (CRIB), which was submitted to RAE2008 in UoA12 – Allied Health Professions and Studies. According to the RAE, UWE has proportionately more internationally excellent research than any other University in the UK. Furthermore, the Times Higher Education RAE ratings placed our Biomedical Science research within the top 10% of University submissions. This highlights the world class research being undertaken in CRIB.

Learning and teaching excellence

The quality of learning and teaching within the department is reflected in the awards of two university teacher fellows and one national teacher fellow (check), and actively publish in education research. The Quality, Management and Enhancement (QME) of the provision is further enhanced through staff development. Staff receive annual appraisals, in-house training, and are actively encouraged to attend external courses and conferences, for which the faculty provides funds.

New academic staff undertake a one-year Academic Professional Development Programme which leads to Post-Graduate Certificate in Education, which is accredited by the Higher Education Academy (HEA). All staff are actively encouraged toward university and national teacher awards and fellowships.

External collaborator and outreach

The integrated nature of the programme necessitates ongoing and close liaison with employers of Biomedical Scientists within the National Health Service and industry. This is extremely important and is achieved in the following ways:

- A culture of two-way communication exists between University academic staff and biomedical scientists within the South West, in particular the Joint Training Officers (JTO) group.
- 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.
- Practitioners are actively involved in the design, delivery and continued development of the Biomedical – and Healthcare Science (Life Sciences) programmes. Similarly, service users are consulted on a regular basis to ensure that the programmes deliver training that matches service needs.
- The Joint Training Officer's Committee monitors and advises on the operation of the IBMS accredited training places in accordance with agreed standards and policies. In addition, this committee provides a valuable forum for practitioners' views on the undergraduate provision, and for discussion pertaining to development of the degree programme.
- Academic staff supervising sandwich (year-long) placements and shorter term local hospital placements facilitate the development of collaborations, and achieve valuable professional "voice" that advises all of our programmes.

What methods have been used in the development of this programme to evaluate and improve the quality and standards of learning? This could include consideration of stakeholder feedback from, for example current students, graduates and employers.

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, available on the [University's website](#).