Programme Specification Document

Approved, 2022.05

Overview

Programme Code	32805
Programme Title	Biomedical Science
Awarding Institution	Liverpool John Moores University
Programme Type	Degree
Language of Programme	All LJMU programmes are delivered and assessed in English
Programme Leader	Kenneth Ritchie
Link Tutor(s)	

Awards

Award Type	Award Description	Award Learning Outcomes
Target Award	Bachelor of Science with Honours - BSH	See Learning Outcomes Below
Recruitable Target	Bachelor of Science with Honours (SW) - SBSH	See Learning Outcomes Below
Alternative Exit	Certificate of Higher Education - CHE	Operate in a range of science contexts, and take responsibility for their contributions and outputs. Evaluate information using it to plan and develop investigative strategies and to determine solutions to a wide range of scientific problems. Apply a broad knowledge base, incorporating theoretical concepts and employing a wide range of specialised skills to real and theoretical biomedical applications.
Alternative Exit	Diploma in Higher Education (SW) - SDHE	Generate ideas through the analysis of concepts at an abstract level, with a command of highly specialised skills and the formulation of responses to concrete and abstract problems. Accept responsibility for group and personal work. Analyse and evaluate information, demonstrating significant judgement across a broad range of biomedical related areas.
Alternative Exit	Diploma of Higher Education - DHE	Generate ideas through the analysis of concepts at an abstract level, with a command of highly specialised skills and the formulation of responses to concrete and abstract problems. Accept responsibility for group and personal work. Analyse and evaluate information, demonstrating significant judgement across a broad range of biomedical related areas.

Alternate Award Names	

External Benchmarks

Subject Benchmark Statement	UG-Biomedical science (2019)

Accreditation

Programme Accredited by

PSRB Name	Type of Accreditation	Valid From Date	Valid To Date	Additional Notes
Institute of Biomedical Science (IBMS)	Accredited by the Institute of Biomedical Science (IBMS).			

Programme Offering(s)

Mode of Study, Mode of Delivery	Intake Month	Teaching Institution	Programme Length
Full-Time, Face to Face	September	LJMU Taught	3 Years
Sandwich Year Out, Face to Face	September	LJMU Taught	4 Years

Aims and Outcomes

Educational Aims of the Programme

All programmes within the School of Pharmacy and Biomolecular Sciences aim to provide graduates with a wide knowledge and understanding of core subject matter, thus Biomedical Science aims to provide graduates with an understanding of laboratory-based investigation of human health and disease.

To provide a programme that is recognised and accredited by the IBMS for the completion of the Certificate of Competence Portfolio.

To provide the students with vocationally orientated skills to equip them for a career in biomedical science.

To develop study, information technology (IT) and communication skills to enable students to participate in lifelong learning.

To provide the student with skills in independent research to enable them to undertake relevant postgraduate study.

To develop transferable skills to enable students to enter non-subject specific employment at graduate level.

To encourage students to fully engage with the employability aims of the programme.

In addition to the aims for the main target award, the aim of the sandwich year is to provide students with an extended period of work experience at an approved partner that will complement their programme of study at LJMU. This will give the students the opportunity to develop professional skills relevant to their programme of study, as well as attitude and behaviours necessary for employment in a diverse and changing environment.

Learning Outcomes

Code	Description
PLO1	Appreciate fundamental concepts and principles of subjects underpinning biomedical science, including biochemistry, cell and tissue biology, genetics, microbiology, molecular biology, physiology

Code	Description
PLO2	Maintain laboratory notebooks and prepare laboratory reports.
PLO3	Use laboratory equipment and reagents to prepare data.
PLO4	Analyse and interpret laboratory data relevant to the specialist subjects of cellular pathology, clinical chemistry, clinical immunology, medical microbiology, clinical genetics, haematology and transfusion science.
PLO5	Collect, record and interpret numerical data.
PLO6	Communicate effectively by discussions, written materials, use of images and presentations.
PLO7	Use information technology to prepare, process and present information.
PLO8	Identify targets and follow schedules to meet targets.
PLO9	Identify and work to collective goals and responsibilities and respect the views and opinions of others.
PLO10	Manage their own learning (work independently and within time limits)
PLO11	Achieve employability learning outcomes in line with employability skills and mindset framework
PLO12	Understand that biomedical science is the integrated study of a range of human disorders and disease processes together with their laboratory investigation.
PLO13	Recognise the importance of the theoretical basis of research in biomedical sciences.
PLO14	Engage with the essential facts, concepts, and principles relevant to the biomedical science specialist subjects of cellular pathology, clinical biochemistry, clinical immunology, clinical genetics, medical microbiology, haematology and transfusion science.
PLO15	Critically evaluate information and data from a variety of sources.
PLO16	Apply planning, research methodology and analytical skills to the in depth study of a topic in a chosen field of study.
PLO17	Apply problem solving skills to the laboratory investigation of human health and disease.
PLO18	Apply strategies for the critical appraisal of laboratory methods.
PLO19	Plan and execute laboratory experiments with an awareness of good laboratory practice (GLP) and COSHH assessment.

Programme Structure

Programme Structure Description

Students initially enrol on the Biomedical Science programme (32805) and those students wishing to undertake the Applied Biomedical Science route (31800) may apply when instructed to do so in semester 2 of level 4. Transfer is dependent upon fulfilling a set of transparent criteria, and is dependent on the availability of clinical placements. If more suitable students apply to transfer than there are clinical placements available, additional transparent selection criteria including interview are applied. The programme will offer the opportunity of an additional study year abroad following Level 5 (unless the student undertakes the Sandwich Year, in which case option of study abroad is not available). Students will be enrolled on a 480 credit honours with study abroad programme. Of those 480 credits, 120 will be taken via a Level 5 study abroad module [5109BMBMOL], the modules to be studied in the host institution must be agreed in advance. The Level 5 mean for the final award mark will be calculated based upon the 240 credits at Level 5. Students who study abroad will not be eligible for the sandwich year option (see below) Sandwich Year The placement year will follow Level 5 and students will be enrolled on a 480 credit honours sandwich programme and the Sandwich Year Biomedical Science module (5108BMBMOL). The Level 5 mean for the final award mark will be calculated based upon the 240 credits at Level 5.

The programme structure in this specification applies to students who joined level 4 in September 2022 or later. Students who joined the programme prior to this date will follow the previously validated structure.

Programme Structure - 360 credit points	
Level 4 - 120 credit points	
Level 4 Core - 120 credit points	CORE
[MODULE] 4102BMBMOL Cell Biology Approved 2022.02 - 20 credit points	
[MODULE] 4103BMBMOL Principles of Biochemistry Approved 2022.02 - 20 credit points	
[MODULE] 4106BMBMOL Microbiology Approved 2022.01 - 20 credit points	
[MODULE] 4107BMBMOL Fundamentals of Biomedical Science Approved 2022.03 - 20 credit points	
[MODULE] 4108BMBMOL Anatomy and Physiology Approved 2022.02 - 20 credit points	
[MODULE] 4109BMBMOL Genetics and molecular biology Approved 2022.01 - 20 credit points	
Level 5 - 120 credit points	
Level 5 Core - 120 credit points	CORE
[MODULE] 5101BMBMOL Biomedical Research Methods Approved 2022.03 - 20 credit points	
[MODULE] 5102BMBMOL Clinical Biochemistry Approved 2022.01 - 20 credit points	
[MODULE] 5110BMBMOL Cellular pathology Approved 2022.01 - 20 credit points	
[MODULE] 5111BMBMOL Immunology and medical microbiology Approved 2022.01 - 20 credit points	
[MODULE] 5112BMBMOL Haematology and Transfusion Science Approved 2022.01 - 20 credit points	
[MODULE] 5113BMBMOL Advanced cell and molecular biology Approved 2022.01 - 20 credit points	
Optional placement - 120 credit points	OPTIONAL
Placement Year - 120 credit points	OPTIONAL
[MODULE] 5108BMBMOL Sandwich Year - Biomedical Science Approved 2022.01 - 120 credit points	
OR Study Abroad - 120 credit points	OPTIONAL
[MODULE] 5109BMBMOL Study Year Abroad - Biomedical Science Approved 2022.01 - 120 credit points	
Level 6 - 120 credit points	

Level 6 Core - 120 credit points	CORE
[MODULE] 6104BMBMOL Cancer Approved 2022.01 - 20 credit points	
[MODULE] 6110BMBMOL Medical and clinical genetics Approved 2022.01 - 20 credit points	
[MODULE] 6111BMBMOL Clinical immunology and medical microbiology Approved 2022.01 - 20 credit points	
[MODULE] 6112BMBMOL Integrated Biomedical Science Approved 2022.01 - 20 credit points	
[MODULE] 6113BMBMOL Biomedical Science Honours Project Approved 2022.01 - 40 credit points	

Module specifications may be accessed at https://proformas.ljmu.ac.uk/Default.aspx

Approved variance from Academic Framework Regulations

Variance
Students must achieve a pass mark in all assessment components for the following modules: 5111BMBMOL, 5110BMBMOL, 5112BMBMOL, 5102BMBMOL, 6113BMBMOL, 6111BMBMOL, 6110BMBMOL, 6109BMBMOL.

Teaching, Learning and Assessment

Lead lectures, tutorials, seminars, laboratory sessions, work-based learning (portfolio),workshops, poster sessions, case studies, literature analysis, problem solving, data analysis and self directed study. Coursework (essays, reports, reviews) examinations (essay style, MCQ and short answer, problem solving, data analysis) and poster presentations. Portfolio-based exercises. Lead lectures, tutorials, case studies, laboratory practical classes, research based teaching materials and methods, literature reviews, seminars. Written examinations, laboratory reports, research project reports, literature review manuscripts, seminars and case study reports. Practical laboratory classes, work placements in clinical laboratories, data handling workshops, problem-based learning, seminars and lectures Practical reports, portfolios, case study reports, project reports and written exams. Transferable/key skills are embedded in modules within the programme. Examples include the use of spreadsheet and computer packages to analyse data, seminars, oral presentations, reflective portfolios and research projects. Practical computer based exams on the use of IT, group seminars, oral presentations, project reports and portfolios.

Opportunities for work related learning

The degree programme offers the option of a sandwich route, which involves 1 year of work experience in a specialist field. This occurs at the end of level 5 and the training (which may take place in a NHS or industrial laboratory) allows students to develop their professional and technical skills.

Entry Requirements

Type	Description
NVQ	Applicants with either a HNC or HND will be considered on an individual basis and may be eligible for some recognition of prior learning

BTECs	National Certificate (RQF): Acceptable only when combined with other qualifications National Extended Certificate: Acceptable only when combined with other qualifications National Diploma (RQF): Acceptable on its own and combined with other qualifications National Diploma subjects / grades required: D*D* in a relevant scientific discipline if studied on its own or to the total of 112 UCAS points if combined with other qualifications National Extended Diploma (RQF): Acceptable on its own and combined with other qualifications National Extended Diploma subjects / grades required: DMM in a relevant scientific discipline if studied on its own or to the total of 112 UCAS points if combined with other qualifications
Alternative qualifications considered	Declaration of disclosure of any criminal convictions including those outstanding. In common with standard University policy, applicants should have GCSE passes in Mathematics and English with a minimum grade C, or equivalent.
International Baccalaureate	International Baccalaureate: Acceptable on its own and combined with other qualifications Additional information: 26 IB Diploma Points - specific grades are required from Science
Other international requirements	A wide variety of qualifications may be acceptable provided that they equate to UK requirements. They should also provide evidence of English language ability equivalent to 6.0 IELTS.
A levels	Minimum number of A Levels required: 2 Subject specific requirements: Chemistry and/or Biology. Is general studies acceptable? No Average A Level offer: BBC Are AS level awards acceptable? Acceptable only when combined with other qualifications

Extra Entry Requirements