PROGRAMME SPECIFICATION

Bachelor of Science with Honours in Health Care Science Practitioner (Biomedical Science)

Awarding institution	Liverpool John Moores University
Teaching institution	LJMU
JACS Code	B900
Programme Duration	Part-Time: 5 Years
Language of Programme	All LJMU programmes are delivered and assessed in English
Subject benchmark statement	Biomedical Science (2015)
Programme accredited by	Institute of Biomedical Science Health and Care Professions Council
Description of accreditation	Accredited by the Institute of Biomedical Science (IBMS) Approved by the Health and Care Professions Council (HCPC) for the purpose of providing eligibility to apply for registration with the HCPC as a biomedical scientist
Validated target and alternative exit awards	Bachelor of Science with Honours in Health Care Science Practitioner (Biomedical Science) Diploma of Higher Education in Health Care Science Practitioner (Biomedical Science) Certificate of Higher Education in Health Care Science Practitioner (Biomedical Science)
Programme Leader	Jo Foulkes

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. The Health Care Science Practitioner programme aims to provide graduates with an understanding of laboratory-based investigation of human health and disease.

This programme fulfils the requirements for a Degree Apprenticeship.

The programme aims to:

introduce students to the hospital environment in order to help them make informed choices about the direction of their education and training in Biomedical Science;

introduce the concepts of professional autonomy and accountability;

develop the skills required for the application of practice as a Biomedical Scientist and to enable registration with the HCPC;

develop study, information technology (IT), and communication skills to enable graduates to participate in lifelong learning;

develop skills in independent research to enable graduates to undertake postgraduate study;

encourage students to engage with the development of employability skills.

Alternative Exit/ Interim Award Learning Outcomes - Certificate of Higher Education

A student who is eligible for this award will be able to:

Apply a broad knowledge base, incorporating theoretical concepts and employing a wide range of specialised skills to real and theoretical biomedical applications.

Evaluate information using it to plan and develop investigative strategies and to determine solutions to a wide range of scientific problems

Operate in a range of science contexts, and take responsibility for their contributions and outputs.

Apply a broad knowledge base, incorporating theoretical concepts and employing a wide range of specialised skills to real and theoretical biomedical applications.

Evaluate information using it to plan and develop investigative strategies and to determine solutions to a wide range of scientific problems

Operate in a range of science contexts, and take responsibility for their contributions and outputs.

Alternative Exit/ Interim Award Learning Outcomes - Diploma of Higher Education

A student who is eligible for this award will be able to:

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.

Target award Learning Outcomes - Bachelor of Science with Honours

A student successfully completing the programme of study will have acquired the following subject knowledge and understanding as well as skills and other attributes.

A student who is eligible for this award will be able to:

1. Appreciate fundamental concepts and principles of biological sciences that underpin biomedical science, biochemistry, cell and tissue biology, genetics, microbiology, molecular biology, physiology.

2. Understand that biomedical science is the integrated study of a range of human disorders and disease processes together with their laboratory investigation.

3. Recognise the importance of the theoretical basis of research in biomedical science

4. Engage with the essential facts, concepts, and principles relevant to biomedical science specialist subjects of cellular pathology, clinical biochemistry, clinical immunology, medical microbiology, haematology and transfusion science.

5. Critically evaluate information and data from a variety of sources.

6. Apply planning, research methodology and analytical skills to the in-depth study of a topic in a chosen field of study.

7. Apply problem-solving skills to the laboratory investigation of human health and disease.

8. Apply strategies for the critical appraisal of laboratory methods.

9. Plan and execute laboratory experiments with an awareness of good laboratory practice (GLP) and COSHH assessment.

10. Conduct appropriate diagnostic and monitoring procedures safely and skillfully.

11. Prepare laboratory reports.

12. Use laboratory equipment and reagents to prepare data.

13. Analyse and interpret laboratory data relevant to the specialist subjects of cellular pathology, clinical biochemistry, clinical immunology, medical microbiology, haematology and transfusion science.

14. Practice within the legal and ethical boundaries of the profession.

15. Collect, record and interpret numerical data.

16. Communicate effectvely by discussions, written materials, use of images and presentations.

17. Use information technology to prepare, process and present information.

18. Identify targets and follow schedules to meet targets.

19. Identify and work to collective goals and responsibilities.

20. Audit, reflect on and review practice.

Teaching, Learning and Assessment

The methods used to enable outcomes to be achieved and demonstrated are as follows:

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.

Programme structure - programme rules and modules

Apprentices will enrol at level 4 and funding will normally come from their employer. Apprentices will study alongside full time students on Biomedical Science and Applied Biomedical Science and they take most of the modules but not necessarily in the same order. The one module that differs from the Applied Biomedical Science route is the level 6 Hospital Practice module, 6100HCSEPA. For the apprentices, this module includes the apprenticeship end-point assessment (EPA). In order to ensure that students have appropriate underpinning for the route they take the Programme Leader oversees all students and checks for completion of appropriate modules at a lower level before any given module is attempted.

The following modules on the programme are approved as single-module Certificate of Professional Development awards (CPDs):

35862 Biomedical Skills (4101BMBMOL); 35863 Cell Biology (4102BMBMOL); 35864 Principles of Biochemistry (4103BMBMOL); 35865 Introduction to Biomedical Science (4104BMBMOL); 35866 Anatomy Physiology and Genetics (4105BMBMOL); 35867 Microbiology (4106BMBMOL); 35868 Biomedical Research Methods (5101BMBMOL); 35869 Clinical Biochemistry (5102BMBMOL); 35870 Immunology and Infection (5103BMBMOL); 35871 Histology and Physiology (5105BMBMOL); 35872 Blood Cell Science (5106BMBMOL); 35873 Hospital Practice 1 (5107BMBMOL); 35874 Research Project (40 credits, yearlong) (6100GNBMOL); 35875 Study of Disease 1 (6101BMBMOL); 35876 Study of Disease 2(6102BMBMOL); and 35877 Study of Disease 3 (6103BMBMOL).

Level 6	Potential Awards on completion	Bachelor of Science with Honours
Core	Option	Award Requirements
6100GNBMOL RESEARCH PROJECT (40 credits) 6100HCSEPA HOSPITAL PRACTICE 2 (20 credits) 6101BMBMOL STUDY OF DISEASE 1 (20 credits) 6102BMBMOL STUDY OF DISEASE 2 (20 credits) 6103BMBMOL STUDY OF DISEASE 3 (20 credits)		120 core credits at level 6 0 option credits at level 6

Level 5	Potential Awards on completion	
Core	Option	Award Requirements
5101BMBMOL BIOMEDICAL RESEARCH METHODS (20 credits) 5102BMBMOL CLINICAL BIOCHEMISTRY (20 credits) 5103BMBMOL IMMUNOLOGY AND INFECTION (20 credits)		120 core credits at level 5 0 option credits at level 5

5105BMBMOL HISTOLOGY AND PHYSIOLOGY (20 credits) 5106BMBMOL BLOOD CELL SCIENCE (20 credits) 5107BMBMOL HOSPITAL PRACTICE 1 (20 credits)		

Level 4	Potential Awards on completion	
Core	Option	Award Requirements
4101BMBMOL BIOMEDICAL SKILLS (20 credits) 4102BMBMOL CELL BIOLOGY (20 credits) 4103BMBMOL PRINCIPLES OF BIOCHEMISTRY (20 credits) 4104BMBMOL INTRODUCTION TO BIOMEDICAL SCIENCE (20 credits) 4105BMBMOL ANATOMY, PHYSIOLOGY AND GENETICS (20 credits) 4106BMBMOL MICROBIOLOGY (20 credits)		120 core credits at level 4 0 option credits at level 4

Information about assessment regulations

All programmes leading to LJMU awards operate within the University's Academic Framework.
https://www.ljmu.ac.uk/about-us/public-information/academic-quality-and-regulations/academic-framework

Opportunities for work-related learning (location and nature of activities)

Apprentices will be working in an accredited laboratory and completing work-based learning throughout their studies. Students will be completing their portfolio of competence whilst studying, and will formally be assessed in the modules 5107BMBMOL and 6100HCSEPA alongside full time students on Applied Biomedical Science. 5107BMBMOL addresses the concepts of professional autonomy and accountability as well as enabling the students to develop the skills required for the application of practice in the work place. 6100HCSEPA completes their professional portfolio and prepares students for the End Point Assessment (EPA). Prior to completion of the programme, students will be required to undertake an EPA which requires apprentices to apply the learning and skills developed during the apprenticeship. The EPA will consist of three elements which will be assessed by an independent assessor. The three elements will be a Readiness for Practice situational judgement test, a Professional Discussion based on the apprentice's portfolio or record of evidence and a Presentation and Review of the apprentice's research project. All three elements will be assessed in 6100HCSEPA.

Criteria for admission

A/AS Level
Applicants should have (or expect to obtain) at least 2 'A2' levels or equivalent, including Biology and/or Chemistry with a minimum of 112 points.

BTEC National Diploma
For entry this provision depends on the modules the student has successfully completed and the level at which each module was passed. Three level III units, passed with DMM will normally be required.

AVCE
AVCE applicants should have (or expect to obtain) 112 points in an appropriate discipline (normally science).

Irish Leaving Certificate
Applicants must have passed (or expect to pass) their Irish Higher exams with at least grade BBC in 3 subjects, 2 of which must be sciences

Scottish Higher
Applicants must have passed (or expect to pass) their Scottish Higher exams with at least grade BBC in 3 subjects, 2 of which must be sciences.

International Baccalaureate

Applicants must have (or expect to obtain) the full award including grade 5 in an appropriate science.

Access
Access applicants should have (or expect to obtain) a pass in an appropriate QAA-approved Access course.

Other
Non standard entrants may be interviewed. Declaration of disclosure of any criminal convictions including those outstanding is required. Occupational Health screening and vaccinations as necessary.

In common with standard University policy, applicants should have GCSE passes in Mathematics and English with a minimum grade C, or equivalent.

Students on this degree apprenticeship programme need to be employed as a degree apprentice by a suitable employer.

For further information see
https://www.ljmu.ac.uk/study/degree-apprenticeships/learners/become-a-degree-apprentice

Mature entry
Approved science access or foundation course. Applicants who do not meet the requirements listed may be admitted provided that there is sufficient evidence (interview) that the applicant has the necessary motivation, knowledge and study skills to complete the course successfully

Overseas qualifications
A wide variety of qualifications may be acceptable provided that they equate to UK requirements. An IELTS score of 6.0 (5.5 in each element) is a requirement.

External Quality Benchmarks

All programmes leading to LJMU awards have been designed and approved in accordance with the UK Quality Code for Higher Education, including the Framework for Higher Education Qualifications in the UK (FHEQ) and subject benchmark statements where applicable.

The University is subject to periodic review of its quality and standards by the Quality Assurance Agency (QAA) Published review reports are available on the QAA website at www.qaa.ac.uk

Programmes which are professionally accredited are reviewed by professional, statutory and regulatory bodies (PSRBs) and such programmes must meet the competencies/standards of those PSRBs.

Support for students and their learning

The University aims to provide students with access to appropriate and timely information, support and guidance to ensure that they are able to benefit fully from their time at LJMU. All students are assigned a Personal Tutor to provide academic support and when necessary signpost students to the appropriate University support services.

Students are able to access a range of professional services including:

- Advice on practical aspects of study and how to use these opportunities to support and enhance their personal and academic development. This includes support for placements and careers guidance.
- Student Advice and Wellbeing Services provide students with advice, support and information, particularly in the areas of: student funding and financial matters, disability, advice and support to international students, study support, accommodation, health, wellbeing and counselling.
- Students studying for an LJMU award at a partner organisation will have access to local support services

Methods for evaluating and improving the quality and standards of teaching and learning

Student Feedback and Evaluation

The University uses the results of student feedback from internal and external student surveys (such as module evaluations, the NSS and PTES), module evaluation questionnaires and meetings with student representatives to improve the quality of programmes.

Staff development

The quality of teaching is assured through staff review and staff development in learning, teaching and assessment.

Internal Review

All programmes are reviewed annually and periodically, informed by a range of data and feedback, to ensure

quality and standards of programmes and to make improvements to programmes.

External Examining

External examiners are appointed to programmes to assess whether:

- the University is maintaining the threshold academic standards set for awards in accordance with the FHEQ and applicable subject benchmark statements
- the assessment process measures student achievement rigorously and fairly against the intended outcomes of the programme(s) and is conducted in line with University policies and regulations
- the academic standards are comparable with those in other UK higher education institutions of which external examiners have experience
- the achievement of students are comparable with those in other UK higher education institutions of which the external examiners have experience

and to provide informative comment and recommendations on:

- good practice and innovation relating to learning, teaching and assessment observed by external examiners
- opportunities to enhance the quality of the learning opportunities provided to students

Please note:

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, teaching, learning and assessment methods of each module can be found in module and programme guides.