

## PROGRAMME SPECIFICATION

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### Bachelor of Science with Honours (Fnd) in Forensic Science

<b>Awarding institution</b>	Liverpool John Moores University
<b>Teaching institution</b>	LJMU
<b>UCAS Code</b>	F411
<b>JACS Code</b>	F410
<b>Programme Duration</b>	Full-Time: 4 Years, Sandwich Thick: 5 Years
<b>Language of Programme</b>	All LJMU programmes are delivered and assessed in English
<b>Subject benchmark statement</b>	Forensic Science (2012)
<b>Programme accredited by</b>	Chartered Society of Forensic Sciences
<b>Description of accreditation</b>	<a href="http://www.chartered-society-offorensicsciences.org">www.chartered-society-offorensicsciences.org</a>
<b>Validated target and alternative exit awards</b>	Bachelor of Science with Honours (Fnd) in Forensic Science Bachelor of Science with Honours (SW) in Forensic Science Diploma of Higher Education in Forensic Science Diploma in Higher Education (SW) in Forensic Science Certificate of Higher Education in Forensic Science
<b>Programme Leader</b>	Helen Burrell

### Educational aims of the programme

The main educational aims of the Forensic Science Programme are to:

Provide a body of knowledge and practical training which enables the student to pursue a career in forensic science and in a range of alternative areas of employment which use biomolecular and related analytical techniques.(e.g. B3.2, B3.3).

Provide the opportunity for every student to pursue a range of studies commensurate with their individual interests within the area outlined above through informed choice.

Permit the student to develop the skills and understanding of scientific methodology (e.g. B3.3, B3.5).

Develop transferable skills to enable students to enter non-subject specific employment at graduate level

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

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

Encourage students to engage with the development of employability skills by completing a self-awareness statement.

In addition to the aims for the main target award, the sandwich programme aim 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.

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

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

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 forensic applications.

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 forensic related areas.

A student who successfully completes a placement year will be eligible for the Sandwich award and will, in addition to the above, be able to demonstrate the professional and personal skills necessary for effective employment within a professional environment.

## **Target award Learning Outcomes - Bachelor of Science with Honours (Fnd)**

*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. Understand and apply concepts and principles of the subjects and techniques employed in forensic science. including - Scene of crime procedures - Search and recovery procedures - The analysis and evaluation of evidence.
2. Use and develop Laboratory skills, principles of experimental method and the research process.
3. Understand and apply the principles of general English Law and the Police and Criminal Evidence Act.
4. Interpret and apply principles and methods of disciplines underpinning forensic science, such as anthropology, analytical chemistry, toxicology, molecular biology.
5. Evaluate the significance of experimental data or evidence, draw appropriate conclusions and place them in a subject /scientific context.
6. Analyse, synthesise, and summarise information.
7. Apply knowledge and understanding to modelling, problem solving and hypothesis testing.
8. Recognise the implications of professional ethics and standards and apply them.
9. Interpret a set of circumstances in a legal context.
10. Use appropriate resources (e.g. IT, Library) to find and organise information.
11. Recognise and apply safe working practice in the laboratory and/ or the field with an awareness of good laboratory practice (GLP) COSHH and risk assessments
12. Employ a range of methods for the collection, analysis and presentation of information.
13. Plan, design and execute a piece of research and produce a concise and precise final report or presentation.
14. Manage time and tasks effectively as an individual and as part of a team.
15. Use integrative skills to analyse and solve problems, applying numerical and statistical techniques where relevant.
16. Communicate scientific information effectively by discussion, written materials, use of images and oral presentations.
17. Use the internet, databases, spreadsheets and word processing packages.
18. Identify skill levels, personal development targets and employment goals in line with PDP and self-awareness statement.

## **Teaching, Learning and Assessment**

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

Lectures, practicals, small group tutorials, seminars, workshops, individual project work, problem-based learning scenarios, self-directed study and student led group symposia.

Cognitive skills are assessed via many methods such as, but not exclusively, written examinations (short answer questions, essay style and MCQ), laboratory reports, research project report, data handling tests, oral presentations and group poster sessions.

It should be noted that if it is felt that a student is in need of key skill enhancement the Programme team is quick to direct students to the many study support sessions that the University provides.

The learning, teaching and assessment strategy of the Forensic Science programme is designed to encourage within the student a progressive acquisition of subject knowledge and skills by moving from level 4 where there is a greater degree of support and assistance to level 6 where there is a greater degree of independence and self-direction especially within the Research Project. The integration and cross-referencing of material between different modules should ensure that the student sees the forensic science field as a whole rather than discrete sub-units, allowing student responsibility of their own learning across disciplines as they enter the final level of their degree programme and subsequently on to their professional career.

## Programme structure - programme rules and modules

The programme is offered in full-time and full time sandwich. The programme is structured around the University Academic Framework. Credits will be gained as modules are passed. The modular programme allows students to structure their programme of study within certain prescribed limits. Students must satisfy the programme requirements at each level to allow them to graduate with their designated degree title. Core modules teach the essential knowledge and skills, which every forensic science graduate can be expected to have. Core modules at levels 4 and 5 are also designed to provide students with the skills and knowledge needed to study a range of more specialised modules at level 6. They have been carefully chosen as a foundation on which to make an informed choice of optional modules, primarily at levels 5 and 6. These optional modules give students the opportunity to pursue their particular areas of interest within the programme.

### Study Abroad (5106FSBMOL)

Students will be offered the opportunity of 120 credits of study abroad at Level 5. The aim is to provide students with an additional year of study at an approved overseas partner that will complement their programme at LJMU. Students will be enrolled on a 600 credit honours with study abroad programme. Of those 600 credits, 120 will be taken via a Level 5 study abroad module, 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.

### Sandwich Year (5107FSBMOL)

The aim 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.

The placement year will follow Level 5 and students will be enrolled on a 600 credit honours sandwich programme. The Level 5 mean for the final award mark will be calculated based upon the 240 credits at Level 5.

Level 6	Potential Awards on completion	Bachelor of Science with Honours (Fnd)
Core	Option	Award Requirements
6100GNBMOL RESEARCH PROJECT (40 credits) 6101FSBMOL ADVANCED FORENSIC METHODS (20 credits) 6103FSBMOL EXPERT WITNESS (20 credits)	6002PHASCI ADVANCED PHARMACEUTICAL ANALYSIS (20 credits) 6102FSBMOL DRUG ANALYSIS AND TOXICOLOGY (20 credits) 6214NATSCI FORENSIC BIOSCIENCE (20 credits) 6311NATSCI FORENSIC ANTHROPOLOGICAL GENETICS (20 credits)	80 core credits at level 6 40 option credits at level 6
Level 5	Potential Awards on completion	
Core	Option	Award Requirements
5101FSBMOL FORENSIC SCIENCE RESEARCH METHODS 2 (20 credits) 5102FSBMOL TRACE EVIDENCE	5103PS Investigation Skills (20 credits) 5313NATSCI FORENSIC HUMAN IDENTIFICATION (20 credits)	100 core credits at level 5 20 option credits at level 5

ANALYSIS (20 credits) 5103FSBMOL ANALYTICAL FORENSIC SCIENCE (20 credits) 5104FSBMOL MOLECULAR FORENSICS (20 credits) 5105FSBMOL FORENSIC METHODS (20 credits)		
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Level 4	Potential Awards on completion	
Core	Option	Award Requirements
4101FSBMOL FORENSIC SCIENCE RESEARCH METHODS 1 (20 credits) 4102FSBMOL CRIME SCENE INVESTIGATION (20 credits) 4103FSBMOL FORENSIC CHEMISTRY (20 credits) 4104FSBMOL FORENSIC SCIENCE (20 credits) 4105FSBMOL MOLECULAR BIOSCIENCE FOR FORENSIC SCIENCES (20 credits) 4308NATSCI FORENSIC FIELD SKILLS (20 credits)		120 core credits at level 4 0 option credits at level 4

Level 3	Potential Awards on completion	
Core	Option	Award Requirements
3402FNDSCI INTRODUCTORY CHEMISTRY AND CELL BIOLOGY (20 credits) 3404FNDSCI FUNDAMENTALS OF PHYSICAL AND INORGANIC CHEMISTRY (20 credits) 3408FNDSCI FUNDAMENTALS OF ORGANIC CHEMISTRY (20 credits) 3410FNDSCI SKILLS AND PERSPECTIVES IN BIOMOLECULAR SCIENCES 1 (20 credits) 3411FNDSCI SKILLS AND PERSPECTIVES IN BIOMOLECULAR SCIENCE 2 (20 credits) 3412FNDSCI HUMAN ANATOMY AND PHYSIOLOGY (20 credits)		120 core credits at level 3 0 option credits at level 3

## 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)

Students are provided with the opportunity to undertake a sandwich placement. Additionally they are encouraged to attend lectures by outside practitioners in the field given outside of formal lectures. Within modules, specialist topics are covered by external lecturers from ( for example) Merseyside police etc. The facility to attend an autopsy is also provided. Much of the content of a number of forensic specific modules is work related and based on problem based learning techniques.

## Criteria for admission

### **A/AS Level**

88 points at A-level, with grade C at chemistry and/or biology.

### **BTEC National Diploma**

a BTEC Ordinary Certificate or National Diploma with three level III units in appropriate subjects passed with distinction, merit, merit.

### **AVCE**

AVCE (formerly GNVQ) in an appropriate subject to 88 points or equivalent,

### **Irish Leaving Certificate**

Irish Leaving Certificate: Acceptable on its own and combined with other qualifications

- Grades / subjects required: 88 UCAS points
- FETAC acceptability: Not acceptable

### **Scottish Higher**

Scottish Higher: Acceptable on its own and combined with other qualifications

- Additional information: 88 UCAS points
- Scottish Advanced Higher: Acceptable on its own and combined with other qualifications
- Additional information: 88 UCAS points

### **International Baccalaureate**

International Baccalaureate: Acceptable on its own and combined with other qualifications

- Additional information: 88 UCAS points

### **Access**

Access to Higher Education Diploma acceptability: Acceptable on its own and combined with other qualifications

- Further information: Pass in a relevant science based programme

### **Higher national diploma**

Candidates with a relevant HNC/HND may be admitted straight into level 5 of the degree course, i.e. gain RPL for the whole of level 4. Owing to the very applied nature of the second year, these candidates will not be able to claim any additional RPL at level 5. Candidates employed by an accredited forensic science laboratory and having relevant experience may be considered for RP(E)L at level 5.

### **Other**

Applicants should have GCSE passes in five subjects at grade C or above, and in common with standard University policy, these should include Mathematics and English Language at grade C or above, or equivalent.

Students can claim Recognition of Prior Learning (RPL) and Recognition of Prior Experiential learning (RP(E)L) in accordance with the assessment regulations.

### **Mature entry**

Applications are also welcome from highly motivated students with relevant experience, but without the necessary formal qualifications. Applicants seeking admission with non-standard entry qualification will normally be interviewed.

### **Overseas qualifications**

Non-native English speakers will have to prove an appropriate level of proficiency in English language ability equivalent to 6.0 IELTS.

## **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](http://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.*