

PROGRAMME SPECIFICATION

Bachelor of Science with Honours in Physics with Astronomy

Awarding institution	Liverpool John Moores University
Teaching institution	
UCAS Code	F3F5
JACS Code	F500
Programme Duration	
Language of Programme	All LJMU programmes are delivered and assessed in English
Subject benchmark statement	B. Sc. Physics
Programme accredited by	
Description of accreditation	
Validated target and alternative exit awards	Bachelor of Science with Honours in Physics with Astronomy Bachelor of Science in Physics with Astronomy Diploma of Higher Education in Physics with Astronomy Certificate of Higher Education in Physics with Astronomy
Programme Leader	David Bersier

Educational aims of the programme

The aims of the programme are:

to provide an education in the principles of physics and related areas of astronomy and astrophysics appropriate for those aiming for careers in which physics and its methodology will be valuable.

to use our involvement in first-class international scientific research, both to enrich our teaching and to inform course design.

to encourage each student's learning, understanding and application of the knowledge taught.

to develop students' mathematical and analytical skills

to develop students' competence in scientific communication, both in oral and written form

to monitor and review our teaching regularly to ensure the maintenance of quality.

Target award Learning Outcomes - Bachelor of Science with Honours

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

Knowledge and understanding

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

A1. knowledge and understanding of the syllabus material

A2. the ability to think logically, analyse problems and phenomena and to devise explanations or solutions

A3. an appreciation of the role of mathematical modelling of physical phenomena to produce predictions which can be tested against experimental observations

A4. an awareness of the importance of accurate experimentation in the understanding of natural phenomena

A5. the practical and technical skills required for physics and astronomical experimentation and observation and an appreciation of the importance of a systematic approach to experimental measurement.

Teaching, learning and assessment methods used to enable outcomes to be achieved and demonstrated

The programme material is delivered in modules, which are defined in the Department's Student Handbook provided for all students in terms of aims, learning objectives and assessment.

In the majority of modules, the primary medium of teaching is the lecture, which introduces the student to the subject and maps out the module content.

Small group tutorials, usually based around a structured set of problems set by the lecturer, reinforce the lecture material and provide a setting for two way discussions of ideas of physics.

Emphasis is also placed on the importance of students' private study, with recommended private study times listed in the Handbook.

Practical work is varied and progressive throughout the three years of the programme, concluding with a project in Year 3.

Experience in computing and IT skills is based around an introductory module in Year 1 and usage in the practical laboratories in all years.

Communication skills are developed progressively throughout the programme. Student presentations of a scientific topic to the tutorial group in Year 1 and to two academic staff in Year 2 lead on to a 20 minute presentation, including 5 minutes for questions, of the Year 3 project to students and academic staff.

Assessment

Assessment is by examination and/or continual assessment of written work. The various assessment procedures are intended to guide the student towards a balanced study of the subject and to measure as fairly as possible their ability. Examinations consist of questions designed to test knowledge and understanding as well as problem solving, analytical skills and insight.

Skills and other attributes

Intellectual Skills

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

Teaching, learning and assessment methods used to enable outcomes to be achieved and demonstrated

Assessment

Professional practical skills

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

Teaching, learning and assessment methods used to enable outcomes to be achieved and demonstrated

Assessment

Transferable / key skills

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

D1. develop skills in computing, numeracy, written and oral communication

D2. have mathematical modelling and problem solving skills

D3. be able to carry out accurate experimental measurements

D4. be able to use telescopes to make astronomical observations

D5. have experience of working as an individual or in small groups

D6. have the ability to organise time and meet deadlines

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Programme structure - programme rules and modules

Programme rules

Level 6	Potential Awards on completion	Bachelor of Science with Honours
Core	Option	Award Requirements
		0 core credits at level 6 0 option credits at level 6
Level 5	Potential Awards on completion	
Core	Option	Award Requirements
		0 core credits at level 5 0 option credits at level 5
Level 4	Potential Awards on completion	
Core	Option	Award Requirements
		0 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)

Criteria for admission

A/AS Level

The typical offer is 280 UCAS tariff points.. This should consist of Grades BB at A level in Physics and Mathematics and Grade C in a third subject at A level. Other contributions to the total tariff score, such as AS levels, will also be considered. All other equivalent qualifications are also given consideration for entry.

Other

The normal literacy and numeracy requirements of the Faculty of Science are Grade C or above in GSCE in both English and Mathematics or their equivalents.

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.