

PROGRAMME SPECIFICATION

Foundation Certificate in Engineering and Technology

Awarding institution	Liverpool John Moores University
Teaching institution	LIVERPOOL JOHN MOORES UNIVERSITY
UCAS Code	H100
JACS Code	H100
Programme Duration	
Language of Programme	All LJMU programmes are delivered and assessed in English
Subject benchmark statement	Engineering Council UK Spec
Programme accredited by	
Description of accreditation	
Validated target and alternative exit awards	Foundation Certificate in Engineering and Technology
Programme Leader	Rebecca Bartlett

Educational aims of the programme

1. To enable students with non-technical qualifications to gain the necessary mathematical and technical knowledge and skills to enter the first year of a degree programme within the School of Engineering, Technology and Maritime Operations.
2. To enable students to explore and increase their interest in engineering and technology.
3. To enable students to gain the learning skills necessary to make the most of their future studies in engineering and technology, throughout their lives.
4. To enable students to communicate effectively in technical fields.

Target award Learning Outcomes - Foundation Certificate

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. the elementary mathematical techniques used in engineering and technology
- A2. the basic scientific principles underpinning engineering and technology
- A3. the social context in which engineers and technologists work
- A4. techniques for carrying out fundamental laboratory experiments

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

Acquisition of knowledge and understanding is developed through lectures, tutorials, practicals and directed student-centred learning. Handouts, exercises and electronic resources are provided to assist student-centred learning. Scientific principles will be studied in part through real world engineering systems to put them in context.

Assessment

Testing of the knowledge base and understanding is through unseen written examinations, assessed coursework such as laboratory workbooks, problem solving courseworks and computer based tests.

Skills and other attributes

Intellectual Skills

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

- B1. select and use appropriate mathematical methods for solving simple engineering problems
- B2. analyse results of laboratory experiments and relate them to theory
- B3. explain basic engineering principles

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

Intellectual abilities are developed through problem solving in lectures, tutorials, practicals and directed student-centred learning. Handouts, exercises and electronic resources are provided to assist student-centred learning.

Assessment

Testing of intellectual abilities is through unseen written examinations, assessed coursework such as laboratory workbooks, problem solving courseworks and computer based tests.

Professional practical skills

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

- C1. use standard laboratory equipment
- C2. use basic mathematical methods to solve problems
- C3. work within an appropriate ethical framework

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

Professional practical skills are developed through problem solving and case studies in lectures, tutorials, practicals and directed student-centred learning. Handouts, exercises and electronic resources are provided to assist student-centred learning.

Assessment

Testing of professional practical skills is through assessed coursework such as laboratory workbooks, problem solving courseworks, case studies and presentations.

Transferable / key skills

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

- D1. present technical data In a variety of ways
- D2. use common IT skills
- D3. work as part of a team
- D4. communicate effectively on technical topics
- D5. manage own learning

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

Transferable skills are emphasized through tutorials and seminars, particularly within 'Study Skills' which incorporates Personal Development Planning, but are developed throughout the programme.

Assessment

Assessment of transferable skills is by coursework exercises including oral presentations and short reports.

Programme structure - programme rules and modules

Programme rules

The programme is studied part-time over eighteen months and is taught within the University Academic Framework. All modules are core modules, allowing students to achieve the 120 credits necessary to pass onto year one of their chosen degree programme. To progress on to BEng programmes, students must also achieve an overall aggregate pass mark of at least 55%, with at least 55% in Maths 1, 2 and 3; and 55% in Mechanical or Electrical Engineering Systems depending on programme.

Level 3	Potential Awards on completion	Foundation Certificate
Core	Option	Award Requirements

3000ENGPT INTRODUCTION TO ENGINEERING THEORY (12 credits) 3001ENGPT MATHEMATICS 1 (12 credits) 3002ENGPT MATHEMATICS 2 (12 credits) 3003ENGPT MATHEMATICS 3 (12 credits) 3004ENGPT ELECTRICAL SYSTEMS ENGINEERING (12 credits) 3005ENGPT ENGINEERING PRACTICALS (24 credits) 3007ENGPT STUDY SKILLS (12 credits) 3008ENGPT ENGINEERING SOLUTIONS (12 credits) 3009ENGPT MECHANICAL SYSTEMS ENGINEERING (12 credits)		120 core credits at level 3 0 option credits at level 3
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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

A minimum of 160 UCAS points, of which at least 40 should come from A2s or 'Highers'.

BTEC National Diploma

will also be considered

Irish Leaving Certificate

will also be considered

International Baccalaureate

will also be considered

Other

Applicants should have five GCSE (or equivalent) passes of at least grade C including Mathematics and English (or IELTS 6.0).

Applicants need to demonstrate competence in Mathematics, preferably through a good performance at GCSE or equivalent level.

This is a closed client programme and so is not open for individual applications.

Mature entry

We welcome applications from mature highly-motivated individuals with relevant experience but without the necessary formal qualifications.

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.