

International Year One (Engineering)

Programme Information

2022.01, Approved

Overview

Programme Code	35451
Programme Title	International Year One (Engineering)
Awarding Institution	Liverpool John Moores University
Programme Type	Level 3/4/5 Qualification

Awards

Award Type	Award Description	Award Learning Outcomes
Target Award	Certificate of Higher Education - CHE	N/A

Alternate Award Names	
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Partner Name	Partnership Type
Study Group	Validated

External Benchmarks

Subject Benchmark Statement	UG-Engineering (2019)
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Programme Offering(s)

Mode of Study, Mode of Delivery	Intake Month	Teaching Institution	Programme Length Programme Length Unit
Full-Time, Face to Face	January	Study Group	1 Years
Full-Time, Face to Face	September	Study Group	1 Years

Aims and Outcomes

Educational Aims of the Programme	<p>Educational aims of the programme: To provide students with an environment where they can develop their knowledge of engineering science, fundamental engineering principles and the underpinning subjects such as mathematics and computation to prepare for progression to accredited Engineering degrees. To introduce students to the analysis of technical problems, which will further develop their core engineering knowledge and skills. To provide students with appropriate support and encouragement to develop the necessary skills for independent study so that they can take responsibility for their own learning and subsequent professional development. To initiate the development of high-level transferable skills such as team working, time management, communication, problem solving, using software packages and technical computing. To develop students' English language, number, word-processing, research and writing skills to support successful progression to level 5 of MEng/BEng Mechanical Engineering or MEng/BEng Electrical and Electronic Engineering</p>
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Learning Outcomes

Code	Number	Description
PLO1	1	demonstrate knowledge and understanding of essential facts, concepts, theories and principles of the engineering discipline. This includes an appreciation of the wider multidisciplinary engineering context.
PLO2	2	demonstrate an awareness of the framework of relevant legal requirements governing engineering activities, including personnel, health, safety, and risk (including environmental risk) issues.
PLO3	3	understand the need for an appropriate level of professional and ethical conduct in engineering.
PLO4	4	illustrate an understanding of, and the ability to apply, a systems approach to engineering problems.
PLO5	5	acquire practical engineering skills through a range of practical exercises.
PLO6	6	demonstrate an understanding of current practice and its limitations and some appreciation of likely new developments.
PLO7	7	demonstrate knowledge of a range of engineering materials and components relevant to mechanical engineering and electronic and electrical engineering.
PLO8	8	understand the context in which engineering knowledge can be applied e.g. operations and management, technology, development.
PLO9	9	have an understanding of customer and user needs and the importance of considerations such as aesthetics.
PLO10	10	identify cost drivers.
PLO11	11	speak, read, write and listen at an appropriate level in English.

PLO12	12	demonstrate an understanding of the fundamental scientific principles of mechanical and electronic and electrical engineering.
PLO13	13	demonstrate transferable skills that will be of value in a wide range of situations. These are exemplified by the Qualifications and Curriculum Authority Higher Level Key Skills.
PLO14	14	demonstrate the use of technical literature and other information sources.
PLO15	15	demonstrate the understanding of appropriate codes of practice and industry standards.
PLO16	16	demonstrate an awareness of quality issues.
PLO17	17	demonstrate an ability to apply engineering techniques taking account of a range of commercial and industrial constraints.
PLO18	18	demonstrate fluency in all four English language skills; reading, writing, listening and speaking.
PLO19	19	engage with the development of employability skills by completing a self-awareness statement.
PLO20	20	demonstrate knowledge and understanding of the underpinning mathematical and computer models relevant to the mechanical and electronic and electrical engineering disciplines, and an appreciation of their limitations.
PLO21	21	demonstrate an awareness of developing and technologies related to mechanical engineering and electronic and electrical engineering.
PLO22	22	demonstrate an ability to extract data pertinent to a problem and apply a solution using computer based engineering tools, where appropriate.
PLO23	23	demonstrate an ability to apply mathematical and computer-based models for solving problems in engineering.
PLO24	24	demonstrate an appropriate level of English academic skills.
PLO25	25	apply appropriate quantitative science and engineering tools to the analysis of problems.
PLO26	26	understand the requirement for engineering activities to promote sustainable development.

Course Structure

Programme Structure Description	<p>The International Year One in Engineering (CertHE) will be offered as a full-time programme with both September and January start dates. Students will need to successfully complete 120 credits at level 4 to progress to level 5 of one of the following LJMU programmes: 32118 MEng/BEng Electrical and Electronic Engineering, 32120 MEng/BEng Mechanical Engineering, 36219 MEng/BEng Marine and mechanical engineering, 36183 MEng/BEng Mechatronics and autonomous systems and 35424 BEng. Architectural engineering. The minimum pass mark for modules is 40% for the CertHE award. Students will need to achieve at least 50% in Academic English Skills (AES) for progression to level 5 to demonstrate proficiency in English equivalent to IELTS 6.0. Please note the option modules listed below relate to the pathway/progression route. 4605IYO - Software Development for Embedded Systems (32118/35424) 4606IYO - Analogue Electronics (32118/36183) 4615IYO - Digital Electronics (32118/36183) 4608IYO - Professional Practice and the Environment (32118/36183) 4609IYO - Applied Mechanics 1 (36183/32120/36219) 4610IYO - Thermodynamics & Fluid Mechanics 1 (32120/36219/35424) 4611IYO - Materials (32120/36219/35424) 4612IYO - Engineering Practice (32120/36219/35424)</p>
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Structure - 120 credit points	
Level 4 - 120 credit points	
Level 4 Core - 40 credit points	CORE
[MODULE] 4601IYO Academic English Skills (AES) Approved 2022.01 - 20 credit points	
[MODULE] 4602IYO Engineering Mathematics 1a Approved 2022.01 - 10 credit points	
[MODULE] 4603IYO Engineering Mathematics 1b Approved 2022.01 - 10 credit points	
Level 4 Optional - 80 credit points	OPTIONAL
[MODULE] 4605IYO Engineering Principles Approved 2022.01 - 20 credit points	
[MODULE] 4606IYO Microprocessors and Software Approved 2022.01 - 10 credit points	
[MODULE] 4608IYO Electrical Engineering Practice 1 Approved 2022.01 - 20 credit points	
[MODULE] 4609IYO Applied Mechanics 1 Approved 2022.01 - 20 credit points	
[MODULE] 4610IYO Thermodynamics and Fluid Mechanics 1 Approved 2022.01 - 20 credit points	
[MODULE] 4611IYO Materials and Manufacture Approved 2022.01 - 10 credit points	
[MODULE] 4612IYO Engineering Practice 1 Approved 2022.01 - 20 credit points	
[MODULE] 4615IYO Digital Electronics Approved 2022.01 - 10 credit points	

Teaching, Learning and Assessment

Teaching, Learning and Assessment	Acquisition of underpinning knowledge is achieved mainly through lectures and directed student-centred learning. Student-centred learning is used where appropriate resource material is available. Understanding is reinforced through case-studies. There will also be targeted listening exercises and IT will be used to familiarise students with applications and software relevant to engineering. Testing of the knowledge base is through a combination of unseen written examinations, coursework in the form of case-study reports. The assessment methods will enable students to demonstrate their English language skills; this includes reading and writing exams, presentations and listening tests. The ability to analyse is developed through lectures, case-studies analysis and practical applications. Fundamental principles are delivered predominantly by lectures and laboratory classes. Complex use of English language is taught via skills-based workshops and seminars. The ability to analyse and solve problems is demonstrated via unseen exams, coursework and laboratory activities, alongside project studies. Engineering knowledge, design and practical skills are developed through a combination of lectures, tutorials, practicals (as appropriate) and English skills-based workshops. Fundamental principles are delivered predominantly by lectures and laboratory classes. Analysis, design and practical skills are assessed via coursework, laboratory work and practicals. Presentations, listening and reading skills are all also assessed. Teaching and learning will be serviced by workshops, lectures, tutorials, seminars, debate, academic and technical writing skills, practical and laboratory activities. Teaching and learning will be serviced by workshops, lectures, tutorials, seminars, debate, academic and technical writing skills, practical and laboratory activities.
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Opportunities for work related learning

Opportunities for work related learning
Students will have the opportunity to engage with work related learning (WRL), which is embedded within the learning and teaching strategy, as well as the assessment strategy e.g. real world case studies and problem solving exercises. The development of employability skills is embedded into the structure, design and assessment of the programme. Students will develop skills in the areas of employability such as: Communication, problem solving, team work and leadership, self-management and reflection.

Entry Requirements

Type	Description
Alternative qualifications considered	An English level equivalent to at least IELTS 5.5 overall with a minimum of 5.5 in each component (reading, writing, listening, speaking).
Other international requirements	Overseas and country specific entry requirements can be found here: https://www.ljmuisc.com/programmes/international-year-one/engineering Applicants who have qualifications from countries not listed the link above will be individually advised by Study Group Student Enrolment Advisors.

Programme Contacts

Programme Leader

Contact Name

Link Tutor

Contact Name
