

PROGRAMME SPECIFICATION

Bachelor of Engineering in Marine Engineering and Management

Awarding institution	Liverpool John Moores University
Teaching institution	LJMU
JACS Code	H300
Programme Duration	Full-Time: 15 Weeks
Language of Programme	All LJMU programmes are delivered and assessed in English
Subject benchmark statement	QAA Engineering (2015) and the UK Standard for Professional Engineering Competence (UK-SPEC) (2014).
Programme accredited by	
Description of accreditation	
Validated target and alternative exit awards	Bachelor of Engineering in Marine Engineering and Management
Programme Leader	Geraint Phylip-Jones

Educational aims of the programme

To undertake rigorous study of management techniques applied to a marine engineering environment incorporating aspects of design, construction, law, insurance and finance. The programme will include the changing external environment in which they operate, using the relevant literature and with reference to current commercial practice.

To provide the opportunity to evaluate technical, commercial, legal, financial and management aspects of the maritime industry.

To prepare for or develop a career in technical management in the maritime industry.

To develop students as independent learners.

To enhance lifelong learning skills and to contribute to the development of the maritime industry as effective global citizens.

To develop professional skills relevant to their programme of study, as well as attitudes and behaviours necessary for employment in a diverse and changing environment.

Target award Learning Outcomes - Bachelor of Engineering

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. Demonstrate knowledge and understanding of the structure of, and inter-relationships within the maritime engineering and business sectors.

A2. Analyse ship design construction and performance, and their impact on the maritime business arena.

A3. Demonstrate comprehensive knowledge and understanding of computer models relevant to marine engineering and related management disciplines, and an appreciation of their limitations.

A4. Demonstrate an awareness of developing technologies related to marine engineering and its management.

A5. Demonstrate an ability to use fundamental knowledge to investigate new and emerging technologies.

A6. Extract data pertinent to an unfamiliar problem, and apply its solution using computer based engineering/management tools when appropriate.

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

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.

Assessment

Testing of the knowledge base is through a combination of unseen written examinations, coursework in the form of case-study reports and coursework assignment submissions.

Skills and other attributes

Intellectual Skills

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

- B1. Apply appropriate quantitative engineering and management tools to the analysis of maritime problems.
- B2. Demonstrate an extensive knowledge and understanding of management and business practices, and their limitations, and how these may be applied appropriately to strategic and tactical issues.
- B3. Understand the requirement for engineering/management activities to promote sustainable development.
- B4. Demonstrate an awareness of the framework of relevant legal requirements governing engineering activities, including personnel, health, safety, and risk (including environmental risk) issues.
- B5. Understand the need for a high level of professional and ethical conduct in engineering and management.

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

The student must appreciate the social, environmental, ethical, economic and commercial considerations affecting the exercise of their engineering judgment. They must be able to comprehend the broad picture and thus work with an appropriate level of detail.

Assessment

Acquisition of Intellectual skills 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.

Professional practical skills

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

- C1. Apply practical skills acquired through, for example, individual and group assignments, and the use of computer software for analysis and reporting.
- C2. Demonstrate a thorough understanding of current practice and its limitations and some appreciation of likely new developments.
- C3. Understand the context in which engineering knowledge can be applied to operational and management needs.
- C4. Illustrate an understanding of customer and user needs.
- C5. Identify and manage cost drivers.
- C6. Manage the design process and evaluate outcomes.

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

Analysis, Design and Practical Skills are developed through a combination of lectures, tutorials and practicals as appropriate.

Assessment

Analysis, Design and Practical Skills are assessed through a combination of assessed coursework and examinations.

Transferable / key skills

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

- D1. Demonstrate transferable skills including problem solving, communication, and working with others, as well as the effective use of general IT facilities and information retrieval skills.
- D2. Use technical literature and other information sources.
- D3. Demonstrate an awareness of nature of intellectual property and contractual issues.

D4. Demonstrate an understanding of appropriate codes of practice and industry standards.

D5. Illustrate an awareness of quality issues.

D6. Demonstrate an ability to apply engineering and management techniques, taking account of a range of commercial, legal and industrial constraints.

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

The student must have developed 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 and include problem solving, communication, and working with others, as well as the effective use of general IT facilities and information retrieval skills.

Assessment

Assessment of transferable skills is varied throughout the programme but is mostly coursework based and incorporated in modules.

Programme structure - programme rules and modules

Programme rules

The programme is offered in full-time mode over one semester for the completion of 60 credits, starting in

September. There are four 20 credit modules available, two are core modules that must be completed and a single optional module is selected to make up the required 60 credits.

Level 6	Potential Awards on completion	Bachelor of Engineering
Core	Option	Award Requirements
6105MECH Marine Design and Propulsion (20 credits) 6120MECH Ship Construction and Management (20 credits)	6101MAR Maritime Finance and Economics (20 credits) 6106MAR Law and Insurance (20 credits)	40 core credits at level 6 20 option credits at level 6

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)

Two engineering modules have a high degree of work related learning.

Criteria for admission

Other

This programme will only run for a closed client group. Applicants will have successfully completed an LJMU DipHE in Marine Engineering (or equivalent) at ALAM. There is a recognition agreement in place with ALAM.

IELTS 6.0 or equivalent.

Level 5 Learning Outcomes

To undertake advanced mathematical and computational studies of engineering systems and problems associated with the subjects studied at level 5 and level 6.

To demonstrate the application of basic principles of applied mechanics, thermodynamics and fluid mechanics, and electrical engineering from level 4 to the solution of standard engineering problems.

To demonstrate the intermediate engineering skills that will be required for completion of level 6.

To demonstrate a clear understanding of the business context of engineering development and activities and to demonstrate a range of business skills.

Level 4 Learning Outcomes

Undertake basic mathematical analysis suitable to enable the study of engineering modules at level 4 and level 5.

To apply the basic principles of applied mechanics, thermodynamics and fluid mechanics, materials science and electrical engineering to simplified engineering problems.

To design and manufacture simple engineering components and assemblies.

To demonstrate key skills appropriate to the professional engineer.

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.