

Overview

Programme Code	36363
Programme Title	Marine Technical Superintendent
Awarding Institution	Liverpool John Moores University
Programme Type	Masters
Language of Programme	All LJMU programmes are delivered and assessed in English
Programme Leader	Dante Matellini
Link Tutor(s)	Dante Matellini

Partner Name	Partnership Type
Lloyds Maritime Academy	Supported Distance Learning

Awards

Award Type	Award Description	Award Learning Outcomes
Target Award	Master of Science - MS	See Learning Outcomes Below
Recruitable Target	Postgraduate Diploma - PD	<p>All of the Learning outcomes required for Postgraduate Certificate, plus the following additional outcomes: Extract data pertinent to an unfamiliar problem, and apply its solution using computer based engineering tools when appropriate Critically evaluate and select the most appropriate research methodologies for the solution of professional and commercial problems in a timely and robust manner Select and apply strategies for the selection of relevant information from a large body of knowledge and then critically evaluate the information selected, drawing appropriate conclusions and recommendations Conduct research/scholarly activity in an effective manner and apply new methods to the solution of novel engineering problems in such a way as to deliver the identified outcomes Undertake academic research and demonstrate the ability to present findings using a range of appropriate information technologies including an ability to select appropriate data sets and present them in a format appropriate for the intended recipient Display and evidence enhanced self-learning skills appropriate to the attainment of a FHEQ level 7 qualification Critically evaluate own academic and professional performance, and organise/plan self-learning for the purpose of continuing professional development Work within time constraints and an ability to prioritise workloads in order to deliver to deadlines</p>

<p>Recruitable Target</p>	<p>Postgraduate Certificate - PC</p>	<p>Demonstrate comprehensive knowledge and a critical awareness of essential facts, concepts, theories and principles of mechanical, marine and offshore engineering, and its underpinning science and mathematics. They must have an appreciation of the wider multidisciplinary engineering context and its underlying principles. They must appreciate the social, environmental, ethical, economic and commercial considerations affecting the exercise of their engineering judgment Demonstrate a comprehensive and systematic understanding of the scientific principles of marine and related mechanical engineering disciplines Demonstrate comprehensive knowledge and understanding of mathematical and computer models relevant to the marine and related engineering disciplines, and an appreciation of their limitations Demonstrate an understanding of concepts from a range of areas including some outside engineering, and the ability to apply them effectively in engineering projects Demonstrate a critical awareness of developing technologies related to marine and offshore engineering Use fundamental knowledge to investigate new and emerging technologies and synthesise solutions to engineering problems Apply mathematical and computer-based models for solving problems in engineering, and the ability to critically evaluate the limitations of particular cases Demonstrate an awareness of the limitations of current knowledge and the changing nature of technologies and society, and the need to gain new knowledge through further study and team-based project work in the field of marine and offshore engineering Demonstrate a comprehensive understanding of the principles of management and engineering business practice, techniques for evaluation of technical and business risks and their limitations and potential pitfalls Formulate and test hypotheses, by identifying and undertaking appropriate methods to design/model, analyse and solve industry related problems to meet a specification of a particular engineering system Critically evaluate designs, processes and products, and identify and make improvements by using problem solving skills and appropriate software /and hardware Apply appropriate analytical and modelling techniques to a range of engineering problems and demonstrate the ability to apply the appropriate strategies to the application of analysis tools to solve practical engineering problems Analyse experimental results, and draw comprehensive conclusions based on observed results and published data Prepare technical/business reports to a professional standard and write with authority on their engineering discipline Produce a design that satisfies a given specification Instigate, plan and manage engineering/technical projects, taking into account commercial, industrial, and customer requirements Communicate effectively in a professional manner by the means of written English and through the medium of technical drawings and diagrams Generate and synthesise evidence required in the solution of complex engineering problems</p>
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<p>Alternate Award Names</p>	
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External Benchmarks

<p>Subject Benchmark Statement</p>	<p>PGT-Engineering (2020)</p>
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Programme Offering(s)

Mode of Study, Mode of Delivery	Intake Month	Teaching Institution	Programme Length
Part-Time, Face to Face	September	Lloyds Maritime Academy	2 Years

Aims and Outcomes

Educational Aims of the Programme

The MSc Marine Technical Superintendent is designed to develop marine professionals with the technical and managerial knowledge and skills required to practice as a Marine Technical Superintendent. This includes the development of engineering knowledge and skills in marine design and construction, marine asset management, knowledge of marine insurance and regulatory compliance frameworks, and relevant knowledge of the management of people and finance. The programme is intended to fulfil the post-graduate educational requirements for Chartered Engineer status as defined by the Engineering Council. Marine construction and maintenance.

Learning Outcomes

Code	Description
PLO1	Demonstrate comprehensive knowledge and a critical awareness of essential facts, concepts, theories and principles of mechanical, marine and offshore engineering, and its underpinning science and mathematics. They must have an appreciation of the wider multidisciplinary engineering context and its underlying principles. They must appreciate the social, environmental, ethical, economic and commercial considerations affecting the exercise of their engineering judgment
PLO2	Demonstrate a comprehensive and systematic understanding of the scientific principles of marine and related mechanical engineering disciplines
PLO3	Demonstrate comprehensive knowledge and understanding of mathematical and computer models relevant to the marine and related engineering disciplines, and an appreciation of their limitations
PLO4	Demonstrate an understanding of concepts from a range of areas including some outside engineering, and the ability to apply them effectively in engineering projects
PLO5	Demonstrate a critical awareness of developing technologies related to marine and offshore engineering
PLO6	Use fundamental knowledge to investigate new and emerging technologies and synthesise solutions to engineering problems
PLO7	Extract data pertinent to an unfamiliar problem, and apply its solution using computer based engineering tools when appropriate

Code	Description
PLO8	Apply mathematical and computer-based models for solving problems in engineering, and the ability to critically evaluate the limitations of particular cases
PLO9	Demonstrate an awareness of the limitations of current knowledge and the changing nature of technologies and society, and the need to gain new knowledge through further study and team-based project work in the field of marine and offshore engineering
PLO10	Demonstrate a comprehensive understanding of the principles of management and engineering business practice, techniques for evaluation of technical and business risks and their limitations and potential pitfalls
PLO11	Demonstrate the skills necessary to plan, conduct and present findings of a programme of research
PLO12	Formulate and test hypotheses, by identifying and undertaking appropriate methods to design/model, analyse and solve industry related problems to meet a specification of a particular engineering system
PLO13	Critically evaluate designs, processes and products, and identify and make improvements by using problem solving skills and appropriate software /and hardware
PLO14	Critically evaluate and select the most appropriate research methodologies for the solution of professional and commercial problems in a timely and robust manner
PLO15	Select and apply strategies for the selection of relevant information from a large body of knowledge and then critically evaluate the information selected, drawing appropriate conclusions and recommendations
PLO16	Apply appropriate analytical and modelling techniques to a range of engineering problems and demonstrate the ability to apply the appropriate strategies to the application of analysis tools to solve practical engineering problems
PLO17	Analyse experimental results, and draw comprehensive conclusions based on observed results and published data
PLO18	Prepare technical/business reports to a professional standard and write with authority on their engineering discipline
PLO19	Conduct research/scholarly activity in an effective manner and apply new methods to the solution of novel engineering problems in such a way as to deliver the identified outcomes
PLO20	Produce a design that satisfies a given specification
PLO21	Instigate, plan and manage engineering/technical projects, taking into account commercial, industrial, and customer requirements
PLO22	Undertake academic research and demonstrate the ability to present findings using a range of appropriate information technologies including an ability to select appropriate data sets and present them in a format appropriate for the intended recipient
PLO23	Communicate effectively in a professional manner by the means of written English and through the medium of technical drawings and diagrams
PLO24	Display and evidence enhanced self-learning skills appropriate to the attainment of a FHEQ level 7 qualification
PLO25	Critically evaluate own academic and professional performance, and organise/plan self-learning for the purpose of continuing professional development

Code	Description
PLO26	Work within time constraints and an ability to prioritise workloads in order to deliver to deadlines
PLO27	Generate and synthesise evidence required in the solution of complex engineering problems

Programme Structure

Programme Structure Description

In the first academic year of delivery, students will study the modules: 7500MSIDL 7501MSIDL 7502MSIDL 7503MSIDL 7505MSIDL In the second academic year of delivery, students will study the modules: 7504MSIDL 7506MSIDL 7507MSIDL Students who have registered to undertake the PG Certificate as a target award will complete the following modules: 7500MSIDL - Marine Technology Management 7501MSIDL - Maritime Economics and Management 7502MSIDL - Law and Marine Insurance Students who have registered to undertake the PG Diploma as a target award will complete the following modules: 7500MSIDL - Marine Technology Management 7501MSIDL - Maritime Economics and Management 7502MSIDL - Law and Marine Insurance 7503MSIDL - Marine Maintenance and Asset Management 7504MSIDL - Maritime and Offshore Safety Analysis 7505MSIDL - Research Methods 7506MSIDL - Project Management In order to commence the MSc Project, candidates must first have successfully completed 7505MSIDL - Research Methods

Programme Structure - 180 credit points	
Level 7 - 180 credit points	
Level 7 Core - 180 credit points	CORE
[MODULE] 7500MSIDL Marine Technology Management Approved 2022.01 - 20 credit points	
[MODULE] 7501MSIDL Maritime Economics and Management Approved 2022.02 - 20 credit points	
[MODULE] 7502MSIDL Law and Marine Insurance Approved 2022.01 - 20 credit points	
[MODULE] 7503MSIDL Marine Maintenance and Asset Management Approved 2022.01 - 20 credit points	
[MODULE] 7504MSIDL Maritime and Offshore Safety Analysis Approved 2022.01 - 20 credit points	
[MODULE] 7505MSIDL Research Methods Approved 2022.01 - 10 credit points	
[MODULE] 7506MSIDL Project Management Approved 2022.01 - 10 credit points	
[MODULE] 7507MSIDL MSc Project Approved 2022.01 - 60 credit points	
Level 7 Optional - No credit points	OPTIONAL

Module specifications may be accessed at <https://proformas.ljmu.ac.uk/Default.aspx>

Teaching, Learning and Assessment

Acquisition of knowledge is achieved mainly through on-line lectures and directed student-centred learning. Student-centred learning is used where appropriate resource materials are available. Understanding is reinforced through case-studies. Online discussion forums are used to stimulate discussion between students and academic staff. Testing of the knowledge base is achieved through a combination of coursework in the form of case-study reports, essays and coursework assignment submissions. Online testing is used to provide students with formative feedback on their level of understanding, helping them to focus their learning more effectively. The students must appreciate the social, environmental, ethical, economic and commercial implications of their professional judgements. In order to achieve this, the students' intellectual skills are developed through the application of industrial case-studies, reports and essays. Open-ended project work is designed to permit students to demonstrate achievement of all the learning outcomes in this category. Analysis, design and problem solving skills are assessed through coursework in the form of case-study reports and coursework assignment submissions which require technical evaluations to be made with the support of appropriate analysis. Transferable skills permeate most activities within the programme content and assessment. Skills are assessed through the generation of written reports and the production of supporting technical outputs such as diagrams or drawings. Application of skill associated with time management and research are also embedded within the self-managed MSc project, and the associated assessment via written report and the dissertation.

Opportunities for work related learning

This programme has been developed specifically to meet the needs of industry for working in the role of a Marine Technical Superintendent. The curriculum has been designed to align with the level 7 components of the corresponding apprenticeship standard (<https://www.instituteforapprenticeships.org/apprenticeship-standards/marine-technical-superintendent-degree/>). Modules are delivered with an industry focus and make extensive use of case-studies and industrial research. Students who complete the MSc will have the opportunity to undertake a project which has a strong emphasis on the industrial role of the Marine Technical Superintendent.

Entry Requirements

Type	Description
Alternative qualifications considered	The normal requirements for entry to the award Programme are as follows: An honours degree (2:2 or above) or equivalent in Marine Engineering, Mechanical Engineering, Naval Architecture, or a related engineering discipline. or A level 5 qualification in a relevant subject area along with evidence of experiential learning in the maritime industry, such as a Chief Engineer certificate of competency. All applicants must provide evidence of competence in English. Applicants are required to have achieved an IELTS score of a minimum of a 6.5 or equivalent English language qualifications

Extra Entry Requirements