

Summary Information

Module Code	7007MSC
Formal Module Title	Marine Design Engineering
Owning School	Engineering
Career	Postgraduate Taught
Credits	20
Academic level	FHEQ Level 7
Grading Schema	50

Module Contacts**Module Leader**

Contact Name	Applies to all offerings	Offerings
Eduardo Blanco Davis	Yes	N/A

Module Team Member

Contact Name	Applies to all offerings	Offerings
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Partner Module Team

Contact Name	Applies to all offerings	Offerings
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Teaching Responsibility

LJMU Schools involved in Delivery
Engineering

Learning Methods

Learning Method Type	Hours
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Lecture	22
Tutorial	11

Module Offering(s)

Offering Code	Location	Start Month	Duration
SEP-CTY	CTY	September	12 Weeks
SEP_NS-CTY	CTY	September (Non-standard start date)	12 Weeks

Aims and Outcomes

Aims	The aim of the module is to provide students with the appropriate level of marine engineering knowledge and expertise required of an effective member of a marine engineering design team.
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Learning Outcomes

After completing the module the student should be able to:

Code	Description
MLO1	Develop Process & Instrumentation Diagrams
MLO2	Critically analyse sound pressure levels in an enclosed space
MLO3	Apply HAZOP to a complex scenario
MLO4	Discuss the concept of condition monitoring and associated techniques
MLO5	Evaluate the heat exchanger performance by NTU method
MLO6	Critically evaluate and hence demonstrate an understanding of the importance of shafting alignment by taking into the account variation in bearing offset while in service

Module Content

Outline Syllabus
Space engineering - to become aware of issues surrounding the layout of a machinery space taking account of items such as pipe routes, tankage, proximity to associated plant, maintenance space, access and safety etc. Prime mover performance - become aware of all factors that influence performance and output of prime movers, e.g. altitude, ambient conditions, back pressures (exhaust), noise suppression, emissions control etc. Detailed development of P & ID's. NTU method for evaluation of heat exchanger performance. Condition monitoring techniques including vibration analyses. HAZOP studies. Shafting Alignment.

Module Overview

Additional Information

The module is designed to provide the student with an in-depth grounding of the typical practices and procedures that they will encounter should they pursue a career in the marine engineering design environment. The module will also provide a good grounding for those students pursuing careers in other industries such as power generation and process engineering.

Assessments

Assignment Category	Assessment Name	Weight	Exam/Test Length (hours)	Learning Outcome Mapping
Centralised Exam	Examination	70	2	MLO5, MLO6, MLO2, MLO1, MLO4, MLO3
Portfolio	Portfolio	30	0	MLO1