

Marine Design Engineering

Module Information

2022.01, Approved

Summary Information

Module Code	7106MECH
Formal Module Title	Marine Design Engineering
Owning School	Engineering
Career	Postgraduate Taught
Credits	20
Academic level	FHEQ Level 7
Grading Schema	50

Teaching Responsibility

LJMU Schools involved in Delivery
Engineering

Learning Methods

Learning Method Type	Hours
Lecture	22
Tutorial	22

Module Offering(s)

Display Name	Location	Start Month	Duration Number Duration Unit
SEP-CTY	CTY	September	12 Weeks

Aims and Outcomes

Aims	The aim 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.
------	---

After completing the module the student should be able to:

Learning Outcomes

Code	Number	Description
MLO1	1	Develop Process & Instrumentation Diagrams
MLO2	2	Critically analyse sound pressure levels in an enclosed space
MLO3	3	Apply HAZOP to a complex scenario
MLO4	4	Discuss the concept of condition monitoring and associated techniques
MLO5	5	Evaluate the heat exchanger performance by NTU method
MLO6	6	Understand the 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	The aim the module is to provide you with the appropriate level of marine engineering knowledge and expertise required of an effective member of a marine engineering design team.
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)	Module Learning Outcome Mapping
Centralised Exam	Examination	70	2	MLO1, MLO2, MLO3, MLO4, MLO5, MLO6
Portfolio	Portfolio	30	0	MLO1

Module Contacts

Module Leader

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

Partner Module Team

Contact Name	Applies to all offerings	Offerings
--------------	--------------------------	-----------