

Summary Information

Module Code	7309MECH
Formal Module Title	Offshore Engineering
Owning School	Engineering
Career	Undergraduate
Credits	10
Academic level	FHEQ Level 7
Grading Schema	50

Module Contacts

Module Leader

Contact Name	Applies to all offerings	Offerings
Milad Armin	Yes	N/A

Module Team Member

Contact Name	Applies to all offerings	Offerings
Musa Bashir	Yes	N/A

Partner Module Team

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

Teaching Responsibility

LJMU Schools involved in Delivery
Engineering

Learning Methods

Learning Method Type	Hours
Lecture	11
Tutorial	11

Module Offering(s)

Offering Code	Location	Start Month	Duration
JAN-CTY	CTY	January	12 Weeks

Aims and Outcomes

Aims	To provide advanced understanding of offshore installation types and knowledge of offshore installations from an operational and safety aspect.
-------------	---

Learning Outcomes

After completing the module the student should be able to:

Code	Description
MLO1	Demonstrate the application of offshore installation and offshore installation types.
MLO2	Demonstrate the principles of engineering plants' application and requirements in marine and offshore installations.
MLO3	Demonstrate and understanding and an ability to quantify the environmental loads experienced by an offshore structure.
MLO4	Critically evaluate the changes in the global oil, gas and energy markets and understand the impact on the marine and offshore engineering industry.

Module Content

Outline Syllabus
Introduction to the offshore oil and gas industry. General engineering knowledge of offshore installations and application of installations. With emphasis on fixed and floating offshore oil and gas facilities, renewable energy platforms. Interactions between external loading and structural behaviours of marine structures, concepts of fluid-structure interaction and general dynamics of marine systems. Engineering plant and systems required to support the activities on an offshore installation. Drilling, well structure, well drive mechanisms and injection methods. Production and processing of oil and gas. Environmental factors and environmental loading.

Module Overview

Additional Information

The module is designed to provide advanced understanding of various offshore installation types and the engineering plants required to operate these installations. This module includes content which relates to the following UN Sustainable Development Goals: SDG 7– This module demonstrate energy harvest from various sources (conventional and modern) to ensure access to affordable, reliable and sustainable energy for all. SDG9 – This module will demonstrate the importance of energy infrastructure, sustainable industrialisation and innovation. SDG17 – This module will promote peaceful and inclusive societies for sustainable development by discussing historical events that have triggered political tensioned and threatened access to affordable energy.

Assessments

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