Liverpool John Moores University

Title:	Marine Engineering Knowledge
Status:	Definitive
Code:	**5555SAM** (125430)
Version Start Date:	01-08-2020
Owning School/Faculty:	Engineering
Teaching School/Faculty:	Maritime and Mechanical Engineering

Team	Leader
Geraint Phylip-Jones	Y

Academic Level:	FHEQ5	**Credit Value:**	20	**Total Delivered Hours:**	68
Total Learning Hours:	200	**Private Study:**	132		

Delivery Options
Course typically offered: Runs Twice - S1 & S2

Component	Contact Hours
Lecture	44
Tutorial	22

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Exam	AS1	Examination	60	2
Portfolio	AS2	Portfolio	40	

Aims

To provide the students with the understanding of principles of safe and economic operation of marine diesel engines, steam turbines, boilers and associated equipment to manage, plan and operate the main propulsion and auxiliary machinery.

Learning Outcomes

After completing the module the student should be able to:

1 Recount and discuss the design features and operative mechanism of marine propulsion systems and associated auxiliaries.
2 Discuss the design and operational requirements of auxiliary machinery and systems.
3 Demonstrate an awareness of environmental responsibility and the need for safe systems of working.

Learning Outcomes of Assessments

The assessment item list is assessed via the learning outcomes listed:

Examination	1	2	3
Portfolio	1	2	3

Outline Syllabus

1 Design, operation and maintenance of main propulsion plants.
2 Design, construction, operation and maintenance of propulsion shafting systems.
3 Design, operation and maintenance of auxiliary machinery and systems.
4 Efficient operation, surveillance and performance assessment an of propulsion plant and auxiliary machinery.
5 Refrigeration and air conditioning system design, operation and maintenance.
6 Physical and chemical properties of fuels and lubricants.
7 Steering gear design, operation and maintenance.
8 Steam plant design, operation and maintenance.
9 Environmental responsibilities and legislation.
10 Safety systems and procedures.

Learning Activities

A combination of lectures, and tutorial.

Notes

This module will provide a good grounding for those students wishing to pursue a career in the following marine related disciplines or industries: Marine Engineering Operations, Marine Engineering Design, Marine Superintendent, Surveying and Shipbuilding.