Liverpool John Moores University

Title:	Naval Architecture and Ship Construction
Status:	Definitive
Code:	**5525ALAM** (123817)
Version Start Date:	01-08-2019
Owning School/Faculty:	Engineering
Teaching School/Faculty:	Malaysian Maritime Academy

Team	Leader
Geraint Phylip-Jones	Y

Academic Level:	FHEQ5	**Credit Value:**	20	**Total Delivered Hours:**	103
Total Learning Hours:	200	**Private Study:**	97		

Delivery Options
Course typically offered: Standard Year Long

Component	Contact Hours
Lecture	75
Tutorial	25

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Exam	AS1	Examination	50	3
Portfolio	AS2	A portfolio of summative and formative assessment.	50	

Aims

The module provides an understanding of the principles that maintain the stability of ocean going ships under various conditions of cargo loading and seaway.

The module also provides an understanding of the design and constructional aspects of ships with reference to effective maintenance and environment protection.

Learning Outcomes

After completing the module the student should be able to:

1	Discuss the structural arrangements of different vessel types and be aware of the potential and location of high structural stresses when the vessel is subjected to both operational and damaged conditions.
2	Calculate a vessels transverse and longitudinal stability in both operational and damaged conditions.
3	Calculate the resistance on the vessels hull and its effect on fuel consumption.
4	Discuss the principle of rudders, propellers and the various alternatives devices involved in propelling vessels.

Learning Outcomes of Assessments

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

Examination	1	2	3	4
Portfolio	1	2	3	4

Outline Syllabus

1 Stresses in ship structures
2 Ship construction
3 Ship dynamics and hydrostatics
4 Areas and volumes of ship shapes
5 Shift of CG and, transverse stability, trim and IMO stability guidelines
6 Stability during dry-docking and during grounding
7 Ship resistance, power calculation and fuel consumption
8 Propeller and propulsive devices,
9 Rudder construction and turning effect
10 Damage control and countermeasures
11 Methods and aids to prevent pollution of the environment by ships
12 Fire-fighting equipment and life-saving appliances

Learning Activities

A combination of lectures and tutorial sessions.

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.