

Liverpool John Moores University

Title: SHIP STABILITY
Status: Definitive
Code: **4206NAU** (121933)
Version Start Date: 01-08-2022

Owning School/Faculty: Engineering
Teaching School/Faculty: Engineering

Team	Leader
Ewan Kirkbride	Y

Academic Level: FHEQ4 **Credit Value:** 10 **Total Delivered Hours:** 42
Total Learning Hours: 100 **Private Study:** 58

Delivery Options

Course typically offered: Semester 2

Component	Contact Hours
Lecture	30
Tutorial	10

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Exam	AS1	Examination	100	2

Aims

To provide detailed knowledge in ship stability as required by an Officer of the Watch.

Learning Outcomes

After completing the module the student should be able to:

- 1 Apply the basic principles of hydrostatics to loadline calculations.
- 2 Apply the principles of statical stability to interpret GZ curves.
- 3 Apply the principles of transverse stability to list calculations.
- 4 Apply the principles of longitudinal stability to draught calculations.

Learning Outcomes of Assessments

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

Exam	1	2	3	4
------	---	---	---	---

Outline Syllabus

The principles of Hydrostatics.

Waterline length, breadth, draught, LBP, AW, CW, CB, and freeboard. Loadline Calculations.

Use of Hydrometer

Use of Displacement, Deadweight and TPC Tables Interpret Load Line and draught mark

Statical Stability. Interpret GZ curves Angle of Loll Transverse Stability

Changes in stability during voyage Free Surface.

Introduction to Longitudinal Stability.

Learning Activities

Lectures and tutorials.

Notes

Provides an appreciation of ship stability at Officer of the Watch level.