

Liverpool John Moores University

Title: BRIDGE OPERATIONS
Status: Definitive
Code: **4100NAU** (121773)
Version Start Date: 01-08-2021

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

Team	Leader
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Academic Level: FHEQ4 **Credit Value:** 20 **Total Delivered Hours:** 64
Total Learning Hours: 200 **Private Study:** 136

Delivery Options

Course typically offered: Semester 2

Component	Contact Hours
Lecture	54
Tutorial	6

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Exam	AS1	Examination - Tides and sailings	50	2
Exam	AS2	Examination - Distress, manoeuvring, mooring, anchoring	50	2

Aims

To understand the bridge operations associated with navigational calculations and the movement of the vessel.

Learning Outcomes

After completing the module the student should be able to:

- 1 Understand the general theory on the causes of tides and perform calculations involving tides and sailings.
- 2 Understand the processes used in steering and manoeuvring a vessel.
- 3 Assess the consequences of actions in distress and urgency situations.
- 4 Describe mooring and anchoring arrangements.

Learning Outcomes of Assessments

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

Tides and sailings	1		
Distress, manoeuvring, mooring	2	3	4

Outline Syllabus

The general theory on the causes of tides and perform calculation involving times and heights of tides.

Use formula to calculate DR position by Plane, Parallel and Mercator sailing.

The components of steering systems, and their function.

The various forms in which steering information is relayed to the helmsman.

The meaning and type of alarms fitted to bridge equipment, and know the action to take in the event of malfunction or failure of bridge equipment.

The contingency plans and action to take as OOW in the event of emergencies at sea or in port as applicable.

Distress, Urgency and Safety signals.

Communicate with the distressed craft in accordance with International Regulations and procedures.

Obtain information on the position and nature of the distress.

The further action required to comply with contingency planning and master's instructions.

The general arrangement for search and rescue.

The effects of manoeuvring, turning circles and stopping distances of vessel design and equipment.

Complete basic manoeuvres.

The safety precautions to be observed when securing the vessel when mooring and anchoring.

Anchors, cables and associated gear.

The use of anchors sufficient to ensure that the OOW could undertake duties involved in coming to a single anchor.

Mooring terminology and the mooring systems of various ship types.

The characteristics, safe handling and use of ropes used in mooring.

The safety requirements and how to rig, recover and maintain means of access to the vessel.

Learning Activities

Lectures and tutorials.

Notes

This module can contribute to the underpinning knowledge required for progression to an Officer of the Watch professional qualification.