Liverpool John Moores University

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Title:	NAVIGATION AND STABILITY 1
Status:	Definitive
Code:	**5211NAU** (126766)
Version Start Date:	01-08-2022
Owning School/Faculty:	Engineering
Teaching School/Faculty:	Engineering

Team	Leader
Mike Stringfellow	Y
Alan Bury	

Academic Level:	FHEQ5	**Credit Value:**	20	**Total Delivered Hours:**	97.5
Total Learning Hours:	200	**Private Study:**	102.5		

Delivery Options
Course typically offered: S1 & S2 & Summer

Component	Contact Hours
Lecture	86
Practical	4
Tutorial	4

Grading Basis: Pass/Not Pass

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Exam	Exam 1	General navigation	30	2
Exam	Exam 2	Stability	40	1.5
Portfolio	Portfolio	Coastal passage Plan	30	

Aims

The module will enable the student to develop the techniques of passage planning and demonstrate competency in appraising and planning a passage, incorporating

the influence of weather.
To assess the operational practices required for the safe planning of stability on ships.

Learning Outcomes

After completing the module the student should be able to:

1	Appraise, plan and document a coastal passage including contingencies.
2	Demonstrate the ability to determine a recommended ocean route and to make sailing and tidal calculations relevant to both coastal and ocean passages.
3	Demonstrate knowledge of the theories and factors affecting stability at moderate and large angles of heel, as applicable to merchant ship management
4	Assess the operation and use of modern ships compasses.

Learning Outcomes of Assessments

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

Exam 1	2	4
Exam 2	3	
Portfolio	1	

Outline Syllabus

Voyage planning and navigation for all conditions by acceptable methods, taking into account relevant factors
The application of tidal calculations in Passage Planning
Use all appropriate nautical publications for Passage Planning
Ability to determine and allow for errors of the magnetic and gyro-compasses
Knowledge of the principles of magnetic and gyro-compasses
An understanding of systems under the control of the master gyro and a knowledge of the operation and care of the main types of gyro-compass
Theories and factors affecting stability at moderate and large angles of heel

Learning Activities

Lectures and tutorials integrated with sessions on the cargo simulator.

Notes

This module will contribute to the underpinning knowledge required for progression to professional qualification.
This is a pass/not pass module - students must obtain a mark of 65% or higher in navigation components (Exam 1 and Portfolio) and 60% or higher in stability

components (Exam 2).