

Liverpool John Moores University

Title: METEOROLOGY
Status: Definitive
Code: **4102NAU** (121775)
Version Start Date: 01-08-2021

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

Team	Leader
Jonathan Warren	Y

Academic Level: FHEQ4 **Credit Value:** 10 **Total Delivered Hours:** 38
Total Learning Hours: 100 **Private Study:** 62

Delivery Options

Course typically offered: Semester 1

Component	Contact Hours
Lecture	24
Tutorial	12

Grading Basis: 40 %

Assessment Details

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

Aims

To develop the students' knowledge and understanding of meteorological theory and its application to ships.

Learning Outcomes

After completing the module the student should be able to:

- 1 Describe meteorological processes affecting the operation of ships.
- 2 Assess weather information including charts, reporting and forecasts.

Learning Outcomes of Assessments

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

Examination	1	2
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Outline Syllabus

Accurate meteorological observations and use WMO codes

The structure, and methods of heating and cooling of the troposphere

The forces producing winds

The processes of formation of cloud and precipitation, and the causes of reduced visibility

The general circulation of the atmosphere and the main climatic zones over the oceans

Identify on surface charts the main synoptic patterns and air masses, and describe the weather associated with each including local winds

The weather services available to shipping (in the near coastal area)

Principal ocean currents

The major features of surface and upper air charts establishing the factors that affect the development, decay and movement of surface pressure systems

The weather conditions associated with the surface pressure systems

Interpret and evaluate meteorological and climatological data, with the objective of forecasting the weather and sea conditions that may be encountered during a voyage

The general surface water circulation of the oceans and adjoining seas and how the information is presented

The main types of floating ice, their origins, distribution, movement and nomenclature

The conditions that may cause ice accumulation on ships.

Learning Activities

The majority of the contact time will be in the form of lectures. Tutorial time will be used to practise weather observation.

Notes

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