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Title: CLIMATE AND OCEANS
 Status: Definitive
 Code: **5103NATSCI** (112587)
 Version Start Date: 01-08-2016

Owning School/Faculty: Natural Sciences & Psychology
 Teaching School/Faculty: Natural Sciences & Psychology

Team	Leader
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Academic Level: FHEQ5 **Credit Value:** 24 **Total Delivered Hours:** 62

Total Learning Hours: 240 **Private Study:** 178

Delivery Options

Course typically offered: Standard Year Long

Component	Contact Hours
Lecture	30
Off Site	6
Practical	21
Seminar	3

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Exam	exam	exam	40	2
Report	fld rpt	Field and Lab Report	40	
Presentation	seminar	Seminar	20	

Aims

*To introduce students to climate and marine systems and their complex interactions.
To develop skills in acquiring, processing and interpreting climate and ocean data.*

Learning Outcomes

After completing the module the student should be able to:

- 1 Demonstrate an awareness of the processes important to marine environments and climatology.
- 2 Describe and explain the complex interactions between climate and oceans.
- 3 Evaluate current views concerning the function and significance of the marine environment and the variability and causes of climatic change.
- 4 Interpret and utilise a wide range of climatic and oceanographic data presentation formats.

Learning Outcomes of Assessments

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

EXAM	1	2	3	4
Field Report	2	4		
Seminar	1	3		

Outline Syllabus

Atmospheric circulation. Surface and deep ocean circulation. Air-sea interactions. Estuaries. Primary production. Nutrients and cycling. Marine sediments. Climatic classification, climate zones. Micro-climate. Continentality. Climatic change. Energy balance and transfers, temperature, moisture and wind.

Learning Activities

The module combines lectures, practical exercises, seminars and fieldwork.

Notes

The ocean covers more than two thirds of the planet but its profound and complex impact on climate has only recently being realised. This module will provide students with the broad scientific background to the widely discussed issues of Climate and its relationship to the Oceans. This module feeds into the Level 6 modules Marine & Coastal Environments and Environmental Change.