

## Liverpool John Moores University

Title: MARINE AND FRESHWATER BIOLOGY  
Status: Definitive  
Code: **5209NATSCI** (122069)  
Version Start Date: 01-08-2021

Owning School/Faculty: Biological and Environmental Sciences  
Teaching School/Faculty: Biological and Environmental Sciences

Team	Leader
Simone Durr	Y
Stephanie Evers	
Sheelagh Conlan	
Jeremy Bird	

**Academic Level:** FHEQ5      **Credit Value:** 20      **Total Delivered Hours:** 54  
**Total Learning Hours:** 200      **Private Study:** 146

### Delivery Options

Course typically offered: Semester 2

Component	Contact Hours
Lecture	19
Off Site	12
Practical	12
Workshop	11

**Grading Basis:** 40 %

### Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Presentation	AS1	poster, topic is chosen from a list	50	
Test	AS2	test of sampling methods of practical work	50	

### Aims

*To provide a broad-based foundation to major biological, physico-chemical and*

*oceanographic features of the marine and freshwater environment on a world-wide basis. To introduce marine and freshwater habitat types and their communities and to examine selected habitats in terms of general ecological principles and animal behaviour. To examine the exploitation of marine and freshwater resources and potential sources of damage and threats to marine and freshwater ecosystems. To adopt practical field and laboratory sampling and analysis techniques relevant to the study of marine and freshwater biology.*

## **Learning Outcomes**

After completing the module the student should be able to:

- 1 Critically evaluate the similarities and differences between a wide range of marine and freshwater habitats in terms of their biological and physical components and develop awareness of the biological, behavioural and ecological roles of organisms in habitats ranging from micro to global in scale.
- 2 Utilise computer software, field and laboratory equipment to sample, identify and analyse marine and freshwater biological samples.
- 3 Critically review issues such as conservation, artificial substrata, species invasions, fisheries, aquaculture, abstraction, impoundments, pollution, global climate change.

## **Learning Outcomes of Assessments**

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

Poster	1	3
Online test	2	

## **Outline Syllabus**

*Introduction to basic limnology and oceanography. Productivity in the marine and freshwater environment. Intertidal and subtidal biology. Behaviour of key species in the habitats. Communities of the standing waters and flowing waters. Characteristics of marine and freshwater habitat types found in different parts of the world. Applied marine and freshwater topics and current issues: Exploitation of marine and freshwater resources. Marine and freshwater pollution. Biofouling. Species invasions.*

## **Learning Activities**

The module is delivered through lectures and practical work.

## **Notes**

This module comprises a broad introduction to fundamental aspects of marine and

freshwater biology, including basic oceanography, limnology and productivity in the marine and freshwater environment. Different marine and freshwater habitat types found in various parts of the world are introduced, and their biological (e.g. ecology, animal behaviour) and physical characteristics are discussed. The exploitation and conservation of these ecosystems are considered.