

## Liverpool John Moores University

Title: MARINE BIOLOGY  
Status: Definitive  
Code: **5004NATSCX** (101234)  
Version Start Date: 01-08-2011

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

Team	Leader
Simone Durr	Y

**Academic Level:** FHEQ5  
**Credit Value:** 12.00  
**Total Delivered Hours:** 31.50  
**Total Learning Hours:** 120  
**Private Study:** 88

### Delivery Options

Course typically offered: Semester 2

Component	Contact Hours
Lecture	17.000
Off Site	6.000
Practical	6.000
Workshop	1.000

**Grading Basis:** 40 %

### Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Exam	AS1	short answer and essay style questions	50.0	1.50
Reflection	AS2	poster	25.0	
Reflection	AS3	practical report	25.0	

### Aims

*(a) to provide a broad-based foundation to major biological and oceanographic features of the marine environment on a world-wide basis.*

*(b) to introduce marine habitat types and their communities and to examine selected habitats in terms of general ecological principles.*

(c) to examine the exploitation of marine resources and potential sources of damage to the marine environment.

## Learning Outcomes

After completing the module the student should be able to:

- 1 give an account of the causative factors and world-wide patterns of oceanic currents.
- 2 describe the roles of phytoplankton and macroscopic algae in marine productivity and be aware of the different groups.
- 3 account for the intertidal distribution of animals and plants in relation to biotic and abiotic influences.
- 4 explain the differences, in biological and physical terms, between a wide range of marine habitat types found in various parts of the world.
- 5 give an account of the conservation issues for selected species and be familiar with issues of artificial substrata, species invasions, fisheries, aquaculture and pollution
- 6 Identify common UK rocky shore and biofouling organisms with reference to their habitat.
- 7 present a topic in marine biology in the form of an academic poster

## Learning Outcomes of Assessments

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

EXAM	1	2	3	4	5	
CW	1	2	3	4	5	7
CW	2	3	6			

## Outline Syllabus

*Introduction to basic oceanography (global current patterns, causes of surface and subsurface currents, Coriolis force).*

*Productivity in the marine environment (phytoplankton, macroscopic algae, methods of assessing productivity, global patterns of productivity, influence on other organisms).*

*Intertidal and subtidal biology (influence of tides, waves and other abiotic factors, zonation, concept of indicator species, community patterns, categories of shore types).*

*Characteristics of marine habitat types found in different parts of the world (rocky shores, sandy beaches, coral reefs, mangrove shores, estuaries).*

*Exploitation of marine resources (e.g. micro algae, fisheries, whales and other marine mammals, aquaculture).*

*Marine pollution.*

*Biofouling.*

*Species invasions.*

## Learning Activities

The module is delivered through lectures, practical work in the field and laboratory, and the presentation of student posters.

## References

<b>Course Material</b>	Book
<b>Author</b>	Bertness, M.D. & Nybakken, J.W.
<b>Publishing Year</b>	2005
<b>Title</b>	Marine biology
<b>Subtitle</b>	an ecological approach
<b>Edition</b>	6th
<b>Publisher</b>	Pearson International
<b>ISBN</b>	9780321306692

<b>Course Material</b>	Book
<b>Author</b>	Castro P. & Huber M.E.
<b>Publishing Year</b>	2008
<b>Title</b>	Marine Biology
<b>Subtitle</b>	
<b>Edition</b>	7th
<b>Publisher</b>	McGraw Hill
<b>ISBN</b>	9780071287715

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## Notes

This module comprises a broad introduction to fundamental aspects of marine biology, including basic oceanography and productivity in the marine environment. Different marine habitat types found in various parts of the world are introduced, and their biological and physical characteristics are discussed. The exploitation and conservation of the marine environment are considered.