# Structure and Function of Marine Ecosystems - Course Syllabus

**Course Number:** MarS 228

**Course Title:** Structure and Function of Marine Ecosystems

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| **Academic Semester:** | Spring | **Academic Year:** | 2015/ 2016 |
| **Semester Start Date:** | Jan, 24, 2016 | **Semester End Date:** | May, 19, 2016 |

**Class Schedule:** Sunday-Thursday, 8h-16h

**Classroom Number:** TBD


**Instructor(s) Name(s):** Xabier Irigoyen, Xelu Moran, Susana Agusti, Carlos M. Duarte
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**Teaching Assistant name:**
**Email:**

**Office Location:** Building 2, office 3220
**Office Hours:** by appointment


## COURSE DESCRIPTION FROM PROGRAM GUIDE

Structure and Function of Marine Ecosystems - This course gives an overview of marine ecology. It addresses the global production and distribution of plankton and fish, the vertical distribution of both pelagic and benthic organisms as well as predator-prey interactions among organisms in different habitats. It describes ecosystems from the intertidal zone to the deep sea and outlines ecological principles governing the distributions of organisms and their adaptations to be successful in the different environments. Marine Life (MarS 221) is a prerequisite for this course.

## COMPREHENSIVE COURSE DESCRIPTION

The course focuses on different aspects of the functioning of marine ecosystems. Through a review of the relevant literature the students will follow the progress of ideas and what is our present understanding about some of the basic mechanisms in marine ecosystems. Further, some ecosystems with particular specificities will be addressed specifically. The subjects and ecosytems addressed will be:

- Primary production

- Pelagic food chains
- Natural variability
- Climate change
- Deep Sea
- Hydrothermal vents
- Oxygen minimum zones
- Mangroves

**GOALS AND OBJECTIVES**

The objective of this course is to provide the students with a basic understanding of the main mechanisms that control the functioning of marine ecosystems.

**REQUIRED KNOWLEDGE**

MarS 221 is a prerequisite for this course.

**REFERENCE TEXTS**

Papers for each of the subjects will be provided through the blackboard.

Kaiser, Michel J., and Martin J. Attrill. Marine ecology: processes, systems, and impacts. Oxford University Press, 2011.

Tait, R.V. (Ronald Victor). Elements of marine ecology. 4th ed. Oxford : Butterworth Heinemann, 1998

**METHOD OF EVALUATION**

| **Percentages %** | **Graded content** |
|---|---|
| **50%** | **Assignments: This includes presentations to the class based on assigned papers** |
| **50%** | **Final Exam: A comprehensive final exam.** |

## COURSE REQUIREMENTS

### Assignments

Presentations to the class based on readings of assigned papers.

### Course Policies

Attendance is mandatory to all lectures. Participation is a significant component of the grade. As a block course, students are expected to be available at any time and on short notice during the block period. Any anticipated absence should be cleared with the instructor by written (email) notification as early as possible. Students with approved absences are responsible for catching up on the materials from their classmates.

### Additional Information

It is strongly preferred that communications are via email.

**NOTE**
The instructor reserves the right to make changes to this syllabus as necessary.