

## COURSE SYLLABUS

**1.Name of Curriculum:** Bachelor of Science (Biological Science: Biology)  
Bachelor of Science (Biological Science: Biomedical Science)  
Bachelor of Science (Environment)  
Mahidol University International College

**2.Course Code:** ICBI 255 / ICEN 332      **Course Title:** Introduction to Oceanography

**3.Number of Credits: 4 (Lecture/lab) (3 - 2)**

**4.Prerequisites:**

None

**5.Type of Course:**

Elective for 2<sup>nd</sup> year students

**6.Semester / Academic Year:**

Trimester 1

**7.Course Description:**

History of oceanography; introduction to the earth and geomorphology; evolution of the oceans; plate tectonics; the sea floor; nature of seawater; atmosphere-ocean interactions; circulation patterns and ocean currents; waves and tides; coasts and estuaries; human impacts on oceanic systems. A field trip with practical exercises is included.

**8.Course Objectives:**

By the end of the course students should be able to describe and explain:

- the background and history of oceanography
- the structure of the earth and oceans
- topography and bathymetry
- tectonic movements of the oceanic plates
- sedimentation processes in the oceans
- circulation within the oceans
- waves and tides
- oceanic and coastal habitat types
- man's impact on ocean resources
- the future of the oceans

## 9. Course Outline

Class	Topic			Lecturer
	Lecture / Seminar	Hour	Lab	
1	Introduction to Oceanography	2	-	Dr W. Phillips
2	The Ocean Planet	2	-	
3	The Ocean Basins	2	-	
4	Sedimentary Deposits	4	-	
5	Properties of seawater	4	-	
6	Wind and ocean circulation (+ midterm)	4 (+2)	-	
7	Waves	2	-	
8	Tides	4	-	
9	Marine Ecology	2	-	
10	Productivity in the Oceans	4	-	
11	The Shoreline	4	-	
12	Coastal Habitats	4	-	
13	Ocean Resources	2	-	
14	Human Impacts on the Oceans	2	-	

### 10. Teaching Methods:

Lectures, in-class practical exercises, discussion, self-study and field trip with practical exercises

### 11. Teaching Media:

Text and teaching materials, Powerpoint, handouts, field exercises.

### 12. Course Achievement:

Assessment made from stated criteria: students with 85%+ obtain grade A

### 13. Course Evaluation:

1. Participation	5%	4. Mid-term exam	25%
2. Field trip write-up	10%	5. Final exam	35%
3. Assignments (x5)	25%		

### 14. References:

Pinet, 2000. Invitation to Oceanography – 2<sup>nd</sup> Ed. Jones and Bartlett, Massachusetts  
 Karshaw, 2000. Oceanography: An Earth Science Perspective. Stanley Thornes, Cheltenham  
 Additional readings set by instructor

**15. Instructors:**

Dr Wayne Phillips

**16. Course Coordinator:**

Dr Wayne Phillips