Course Syllabus

1.Program of Study Bachelor of Science (Biological Science)
Bachelor of Science (Environment)

Faculty/Institute/College Mahidol University International College
Faculty of Science,
Faculty of Environment and Resource Studies,
Mahidol University

2.Course Code ICBI 255

Course Title Introduction to Oceanography

3.Number of Credits 4 (3–2-7) (Lecture/lab/self-study)

4.Prerequisite *(s)* None

5.Type of Course Elective

6.Trimester / Academic Year

Trimester 1/every academic year

7.Course Condition

Number of students is 20-30.

8.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.

9.Course Objective *(s)*

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

1. the background and history of oceanography
2. the structure of the earth and oceans
3. topography and bathymetry
4. tectonic movements of the oceanic plates
5. sedimentation processes in the oceans
6. circulation within the oceans
7. waves and tides
8. oceanic and coastal habitat types
9. man’s impact on ocean resources
10. the future of the oceans

10. Course Outline

week	Topics/Seminar	Hours			Instructor
		Lecture	Lab	Self-study	
1	Introduction to Oceanography	3	2	7	Dr. Wayne Phillips
2	The Ocean Planet	3	2	7	Dr. Wayne Phillips

3	The Ocean Basins	3	2	7	Dr. Wayne Phillips
4	Sedimentary Deposits	3	2	7	Dr. Wayne Phillips
5	Properties of seawater	3	2	7	Dr. Wayne Phillips
6	Wind and ocean circulation Midterm Exam	3		7	Dr. Wayne Phillips
7	Waves; Tides	3	2	7	Dr. Wayne Phillips
8	Marine Ecology; Productivity in the Oceans	3	2	7	Dr. Wayne Phillips
9	The Shoreline; Coastal Habitats	3	2	7	Dr. Wayne Phillips
10	Ocean Resources	3	2	7	Dr. Wayne Phillips
11	Human Impacts on the Oceans	3	2	7	Dr. Wayne Phillips
FINAL EXAMINATION					
	Total	33	22	77	

11. Teaching Method *(s)*

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

12. Teaching Media

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

13. Measurement and Evaluation of Student Achievement

Student achievement is measured and evaluated by

13.1 The ability to describe the background and history of oceanography
13.2 The ability to describe the structure of the earth and oceans
13.3 The ability to explain the topography and bathymetry
13.4 The ability to explain the tectonic movements of the oceanic plates
13.5 The ability to explain the sedimentation processes in the oceans
13.6 The ability to explain the circulation within the oceans
13.7 The ability to explain the man's impact on ocean resources

Student's achievement will be graded according to the college and university standard using the symbols: A, B+, B, C+, C, D+, D and F. Minimal passing level is 60%. Student who earns 85% up will have Grade A, 80-84% Grade B+ , 75-79% Grade B, 70-74% Grade C+, 65-69% Grade C, 60-64% Grade D+, 55-59% D, less than 55 Grade F. Students must attend at least 80% of the total class hours of this course.

Grade will be determined on the basis of

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

14. Course evaluation

14.1 Students' achievement as indicated in number 13 above.

14.2 Students' satisfaction towards teaching and learning of the course using questionnaires.

15. Reference *(s)*

Pinet, P.R. Invitation to oceanography. 2nd Edition. USA. Jones and Bartlett. 2000.

Cundy, A. Oceanography: An earth science perspective. Australia. Stanley Thorne. 2000.

Additional readings set by instructor

16. Instructor*(s)*

Dr. Wayne Phillips

17. Course Coordinator

Dr. Wayne Phillips