

## Course Syllabus

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|----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>1. Program of Study</b>       | Bachelor of Science (Biological Science: Biology)<br>Bachelor of Science (Biological Science: Biomedical Science)<br>Natural Sciences (General Education)                                                                                                                                                                                                            |
| <b>Faculty/Institute/College</b> | Mahidol University International College                                                                                                                                                                                                                                                                                                                             |
| <b>2. Course Code</b>            | ICNS 252, ICBI 441                                                                                                                                                                                                                                                                                                                                                   |
| <b>Course Title</b>              | Marine Biology                                                                                                                                                                                                                                                                                                                                                       |
| <b>3. Number of Credits</b>      | 4 (3-2-7) (Lecture/Lab/Self-Study)                                                                                                                                                                                                                                                                                                                                   |
| <b>4. Prerequisite (s)</b>       | ICNS 112                                                                                                                                                                                                                                                                                                                                                             |
| <b>5. Type of Course</b>         | General Education Course                                                                                                                                                                                                                                                                                                                                             |
| <b>6. Session</b>                | 3 <sup>rd</sup> trimester/2004                                                                                                                                                                                                                                                                                                                                       |
| <b>7. Conditions</b>             | -                                                                                                                                                                                                                                                                                                                                                                    |
| <b>8. Course Description</b>     | Natural history of marine animals, exclusive of protozoa and insects; types of environment in the ocean, shallow tropical seas; the relation of biological distributions to the physical and chemical environment; the effects of environmental change; the application of ecological techniques to local problems; field survey with laboratory exercises included. |
| <b>9. Course Objective (s)</b>   | Same as course description                                                                                                                                                                                                                                                                                                                                           |

## 10. Course Outline

Week	Topic	Hour			Instructor
		Lecture	Lab	Self-Study	
1	Introduction, Physical Oceanography: ocean geography	3	2	7	Laird Allan
2	Physical Oceanography: seawater, water movements	3	2	7	Laird Allan
3	Marine Primary Production: algae and plants	3	2	7	Laird Allan
4	Marine Secondary Production: microzooplankton	3	2	7	Laird Allan
5	Marine Biomes: littoral, neretic zone	3	2	7	Laird Allan
6	Review, Midterm Exam	3	2	7	Laird Allan
7	Field Trip (marine lab, coral, beach), Marine Biomes: pelagic and abyssal,	3	2	7	Laird Allan
8	Marine Invertebrates: poriferans, cnidarians	3	2	7	Laird Allan
9	Marine Invertebrates: echinoderms, molluscs	3	2	7	Laird Allan
10	Marine Vertebrates: fish, reptiles, mammals, birds	3	2	7	Laird Allan
11	Student Presentations, Review	3	2	7	Laird Allan
	Total	33	22	77	Laird Allan
Final Examination					

### 11. Teaching Method (s)

- 11.1 Lectures, demonstrations, laboratories and field trip
- 11.2 Student term papers and presentations

### 12. Teaching Media

- 12.1 Notes
- 12.2 Field and lab equipment

### 13. Measurement and evaluation of student achievement

Student achievement is measured and evaluated by

- 13.1 the ability to describe natural history of marine animals, exclusive of protozoa and insects; types of environment in the ocean, shallow tropical seas; the relation of biological distributions to the physical and chemical environment; the effects of environmental change; the application of ecological techniques to local problems; field survey with laboratory exercises included.

Student's achievement will be graded according to the faculty and university standard using the symbols: A, B+, B, C+,C,D+, D, and F.

Students must have attended at least 80% of the total class hours of this course. MUIC standard grading criteria: 90% and above is grade A

Ratio of mark

Class participation	10
Midterm Exam	25
Final Exam (cumulative)	40
Lab and Field work	10
Term Papers and Presentations	15
TOTAL	100

Assessment by standard criteria:

Letter Grade	Percent
A	90 or greater
B+	85 to 89
B	80 to 84
C+	75 to 79
C	70 to 74
D+	65 to 69
D	60 to 64
F	0 to 59

**14. Course evaluation**

14.1 Students' achievement as indicated in number 13 above.

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

**15. Reference (s)**

Jeffrey S. Levinton Marine Biology. Function, Diversity, Ecology: (1995; 2<sup>d</sup> Edition: 2001)

James L. Sumich An Introduction to the Biology of Marine Life: (1988; 7<sup>th</sup> Edition, 1999)

*Exploring Marine Biology*, Paul A. Haefner, Jr. (1996)

**16. Instructor (s)**

16.1 Laird Allan

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**17. Course Coordinator**

Laird Allan