Course Syllabus

1. **Program of Study** Bachelor of Science (Biological Sciences)
   Faculty/Insitute/College Mahidol University International College

2. **Course Code** ICBI 241
   Course Title Ecology and Conservation

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 3/ every academic year

7. **Course Condition**
   Number of students is 20-30.

8. **Course Description**
   Levels of organization and the approaches to the study of ecology; habitat types and adaptation and acclimation to terrestrial and aquatic environments; energy and biogeochemical cycling in the ecosystem; biodiversity and the need for management; population and community ecology; predation, herbivores and competition; management and conservation.

9. **Course Objective *(s)***
   By the end of the course students should be able to describe and explain:
   1. to understand ecological concepts
   2. to understand the influence climate has on the biotic environment
   3. to understand population and community ecology and how predation, herbivory and competition influence dynamics
   4. to understand the concept of biodiversity and the need for its protection and conservation

10. **Course Outline**

week	Topics/Seminar	Hours			Instructor
		Lecture	Lab	Self-study	
1	Introduction: Definitions; Levels of organization; Habitat Types	3	2	7	Dr. Wayne Phillips
2	Adaptation and Acclimation in Aquatic and Terrestrial Ecosystems	3	2	7	Dr. Wayne Phillips
3	Energy in the Ecosystem	3	2	7	Dr. Wayne Phillips
4	Biogeochemical cycling	3	2	7	Dr. Wayne Phillips
5	Population Ecology Midterm examination	3	2	7	Dr. Wayne Phillips
6	Predation and Herbivory	3	2	7	Dr. Wayne

					Phillips
7	Competition	3	2	7	Dr. Wayne Phillips
8	Community Ecology	3	2	7	Dr. Wayne Phillips
9	Biodiversity	3	2	7	Dr. Wayne Phillips
10	Management and Conservation I	3	2	7	Dr. Wayne Phillips
11	Management and Conservation II	3	2	7	Dr. Wayne Phillips
12	Final Examination	3	2	7	Dr. Wayne Phillips
13	Field-trip		20		Dr. Wayne Phillips
	Total	36	20	70	

11. Teaching Method *(s)*

1. Lecture
2. Suggested readings
3. Discussion in class
4. Field-trip with practical exercises

12. Teaching Media

1. Powerpoint Presentations
2. Texts and teaching materials
3. Field exercises

13. Measurement and Evaluation of Student Achievement

Student achievement is measured and evaluated by

13.1 The ability to understand ecological concepts

13.2 The ability to understand the influence climate has on the biotic environment

13.3 The ability to understand population and community ecology and how predation, herbivory and competition influence dynamics

13.4 The ability to understand the concept of biodiversity and the need for its protection and conservation

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. Students must attend at least 80% of the total class hours of this course.

Field trip write up (x2)	20%
Assignment (x4)	20%
Midterm Exam	30%
Final Exam	30%

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. References:

Pickett, S.T.A., Ostfeld, R.S., Shachak, M., and Likens, G. E. The ecological basis of conservation: Heterogeneity, ecosystems, and biodiversity. USA. Chapman and Hall. 1997

Milner-Gullard, E.J. and Mace, R. Conservation of biological resources. UK. Blackwell Science. 1998.

Additional readings set by instructor

16. Instructor *(s)*

Dr. Wayne Phillips

17. Course Coordinator

Dr. Wayne Phillips