

Course Syllabus

1. **Program of Study**
 - Bachelor of Science Program
 - Bachelor of Arts Program
 - Bachelor of Business Administration Program
 - Bachelor of Nursing Science Program
- Faculty/Institute/College** Mahidol University International College
2. **Course Code** ICNS 153
- Course Title** Ecosystems and Natural Resources
3. **Number of Credits** 4 (3-2-7) (Lecture/Lab/Self-Study)
4. **Prerequisite (s)** None
5. **Type of Course** General Education Course
6. **Session** 3rd trimester
7. **Conditions** -

8. Course Description

Human impact on ecosystems and natural resources, global climate change, air quality, management of tropical forests including wildlife, and threats to biological diversity and effects on ecosystems; scientific approaches to investigating the causes and potential solutions. Field and laboratory exercises are included.

9. Course Objective (s)

After successful completion of this course, students should be able to describe and explain the human impact on ecosystems and natural resources, global climate change, air quality, management of tropical forests including wildlife, and threats to biological diversity and effects on ecosystems; scientific approaches to investigating the causes and potential solutions.

10. Course Outline

Week	Topic	Hour			Instructor
		Lecture	Lab	Self-Study	
1	Introduction, Populations, Communities, Ecosystems	3	2	7	Laird Allan
2	Biomass, Energy Flow, Nutrient (Water and Carbon) Cycles	3	2	7	Laird Allan
3	Nutrient Cycles (Nitrogen and Phosphorus)	3	2	7	Laird Allan
4	Local Climate Factors, Biodiversity (Video activity)	3	2	7	Laird Allan
5	Field Activity and Follow-up	3	2	7	Laird Allan

6	Review, <i>Midterm Exam</i>	3	2	7	Laird Allan
7	Terrestrial Biomes, Field Trip	3	2	7	Laird Allan
8	Field Trip follow-up, Global Climate Factors, Global Warming	3	2	7	Laird Allan
9	ENSO, Aquatic and Marine Biomes	3	2	7	Laird Allan
10	Water Resources	3	2	7	Laird Allan
11	Mineral Resources, Energy Resources, Review	3	2	7	Laird Allan
	Total	33	22	77	Laird Allan
Final Examination					

11. Teaching Method (s)

- 11.1 Lectures
- 11.2 Video
- 11.3 Field studies
- 11.4 Self-study (reading texts and websites)

12. Teaching Media

- 12.1 Texts and teaching materials
- 12.2 Video
- 12.3 Field equipment

13. Measurement and evaluation of student achievement

Student achievement is measured and evaluated by

- 13.1 the ability to describe and explain Human impact on ecosystems and natural resources, global climate change, air quality, management of tropical forests including wildlife, and threats to biological diversity and effects on ecosystems; scientific approaches to investigating the causes and potential solutions.

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

- 1. Midterm examination 35 %
- 2. Final examination 35 %
- 3. Active Class Participation 10 %
- 4. Activities 10 %
- 5. Quizzes 5 %

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)

Peter Raven, Linda Berg, George Johnson, Saunders, *Environment*
College Publishing

16. Instructor (s)

- 16.1 Laird Allan
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17. Course Coordinator

Laird Allan