

COURSE SYLLABUS

1. **Program of Study** Bachelor of Science (Chemistry)
Faculty International College, Mahidol University
2. **Course Code** ICCH 444
Course Title Environmental Chemistry
3. **Number of Credits** 4 (3-2-7) (**Lecture/Lab/Self-study**)
4. **Prerequisite** none
5. **Type of Course** Elective major course
6. **Semester / Academic Year** Second trimester 2006-2007
7. **Conditions** Number of students between 20-30
8. **Course Description:**
Introduction to chemical aspects of problems and solution in the environment; field trips and practical exercises included.
9. **Course Objectives:**
After successful completion of this course, students should be able to
9.1 understand the field of environmental chemistry;
9.2 appreciate the chemical aspects of the problems and the solutions for the environment.

10. Course Outline

Week	Topics	Hours			Instructor
		Lecture	Lab	Self-study	
1	Introduction and overview of the environment	2	-	4	TBA
2	Atmospheric chemistry	4	-	8	TBA
3	Terrestrial environment	2	2	5	TBA
4	Estuarine process	2	2	5	TBA
5	Chemical cycling of ions in ocean	4	-	8	TBA
6	Minor components in seawater	2	2	5	TBA
7	Global change	4	-	8	TBA
8	Carbon cycle	2	2	5	TBA
9	Sulphur cycle	4	-	8	TBA
10	Chlorofluorocarbons	2	2	5	TBA

11	Stratospheric ozone	4	-	8	TBA
12	Ozone depletion	2	-	4	TBA
	Total	34	10	73	

11. Teaching Methods:

- 11.1 Lecturing
- 11.2 Self-study
- 11.3 Group discussion and presentation

12. Teaching Media:

Transparencies, handouts and lecturing from boards.

13. Course Achievement:

Student achievement is measured and evaluated by

- 13.1 the ability in understanding the field of environmental chemistry;
- 13.2 the ability to appreciate the chemical aspects of the problems and the solutions for the environment.

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.

Assessment made from the set-forward criteria: student who gets 85% and above will have Grade A.

A suggestive minimum of;

Midterm examination 40%

Final 50%

Class participation 10%

14. Measurement and Evaluation of Student Achievement

- 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:

Andrews, J.E., Jickells, T.D., Lin, P.S., Reid, B., Andrews, J.E. and Brimblecombe, P. **An Introduction to Environmental Chemistry** 2nd Edition, UK: Blackwell Scientific Publication; 2004.

16. Instructors:

TBA

17. Course Coordinator:

Dr. Pakorn Bovonsombat

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