Course Syllabus

1. Name of Curriculum Bachelor of Science Program in Environment
Faculty / Institute/ College Mahidol University International College, Faculty of Science, Faculty of Environment and Resource Studies (FERS), Mahidol University

2. Course Code ICEN 241 **Course Title** Environmental Pollution I

3. Number of Credits 4 **(Lecture/Lab)** (4-0)

4. Prerequisite None

5. Type of Course Required

6. Trimester/ Academic Year
Third/ 2003

7. Course Description
Study problems concerning environmental pollution, especially physical, chemical, and biological properties of water and soil. Special emphasis is on sources and effects of pollutants, technological alternatives for the control, prevention, reduction, and treatment of water and soil pollutions. Methods for monitoring and management of environmental pollution are also included.

8. Course Objectives
The purpose of this course is to give the students an overview of the more pressing environmental concerns facing us today. These would lead to a better practice in natural resources utilization and pollution prevention.

9. Course Outline

Week	Topic				Instructor
	Lecture/ Seminar	Hour	Lab	Hour	
1	Introduction to environmental pollution	4	-		Dr. Patana Thavipoke
2	Chemical and pollutant categories	4	-		Dr. Patana Thavipoke
3	Pollution prevention	4	-		Dr. Patana Thavipoke
4	The Composition and hydrologic cycle of natural	4	-		Dr. Patana Thavipoke
5	waters	4	-		Dr. Patana Thavipoke
6	Water Pollution: Point and non point sources	4	-		Dr. Patana Thavipoke
7	Types of water pollutants	4	-		Dr. Acharaporn Sungpetch
8	Water treatment	4	-		Dr. Helmut Duerrast
9	The nature of soil	4	-		Dr. Patana Thavipoke
10	Behavior and effects of soil contamination	4	-		Dr. Patana Thavipoke
11	High priority contaminant	4	-		Dr. Patana Thavipoke

	Soil remediation				
	Total	**44**	-		

10. Teaching Method

1. Lecture
2. Practical Excercises
3. Discussion
4. Quiz
5. Self-Study

11. Teaching Media

1. Texts and Teaching Materials
2. Transparencies
3. Power Point Presentation

12. Course Achievement

Assessment made from the set-forward criteria. Student who gets 85 % up, will have Grade A

13. Course Evaluation

1. Exercises 10 %
2. Oral Presentation 10 %
3. Midterm Examination 40 %
4. Final Examination 40 %

14. References

1. Chemistry fundamentals, an environmental perspective, 2nd ed. Buell and Girard, 2003
2. Environmental chemistry, 4th ed. Manahan, 1984
3. Integrated pollution control. Förstner, 1995
4. Understanding environmental pollution. Hill, 1999

15. Instructor

Asst. Prof. Dr. Patana Thavipoke

16. Course Coordinator

Asst. Prof. Dr. Patana Thavipoke