

## COURSE SYLLABUS

1. **Program of Study** Bachelor of Science (Chemistry)  
**Faculty** International College, Mahidol University
2. **Course Code** ICCH 453  
**Course Title** Special topics in Industrial Chemistry
3. **Number of Credits** 2(2-0-4) (Lecture/Lab/Self-study)
4. **Prerequisites** ICCH 451
5. **Type of Course** Elective major course
6. **Semester / Academic Year:**  
Third trimester 2006-2007
7. **Course Conditions:** Number of students between 20-30
8. **Course Description:**  
Application of organic chemical reactions and mechanisms in the petrochemical industry.
9. **Course Objectives:**  
After successful completion of this course, students should be able to  
9.1 understand the global chemical and the petrochemical industries;  
9.2 appreciate the current status of the petrochemical and chemical industries in Thailand;  
9.3 understand the application of the theories of organic chemistry to the petrochemical industry.

### 10. Course Outline

Week	Topics	Hours			Instructor
		Lecture	Lab	Self-study	
1	Lecture	2	-	4	Assistant.Professor Dr. Bovornlak Oonkhanond
2	Lecture	2	-	4	
3	Lecture	2	-	4	
4	Lecture	2	-	4	
5	Lecture	2	-	4	
6	Lecture	2	-	4	
7	Lecture	2	-	4	
8	Lecture	2	-	4	
9	Lecture	2	-	4	
10	Lecture	2	-	4	
11	Lecture	2	-	4	
12	Lecture	2	-	4	

	<b>Total</b>	24		48	
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**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. Measurement and Evaluation of Student Achievement**

Student achievement is measured and evaluated by

- 13.1 the ability in understanding the global chemical and the petrochemical industries;
- 13.2 the ability to appreciate the current status of the petrochemical and chemical industries in Thailand;
- 13.3 the ability in understanding the application of the theories of organic chemistry to the petrochemical industry.

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%

**13. 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.

**14. References:**

Green, M.M. and Wittcoff, H.A. **Organic Chemistry Principles and Industrial Practice** USA: Wiley-VCH; 2003.

Weissermel, K. and Arpe, H.-J. **Industrial Organic Chemistry**, 4<sup>th</sup> Edition, USA: Wiley-VCH; 2003.

**16. Instructors:**

Assistant Professor Dr. Bovornlak Oonkhanond

**17. Course Coordinator:**

Dr. Pakorn Bovonsombat

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