COURSE SYLLABUS

Name of Curriculum: Bachelor of Science (Chemistry)
International College, Mahidol University

Course Code: ICCH 220 **Course Title**: Basic Organic Chemistry

Number of Credits: 4 Credits **(Lecture/lab)** (3-2)

Prerequisites: ICCH 111 or equivalent

Type of Course: Science majors (except Chemistry); Core science courses

Semester / Academic Year:
Second trimester 2005-2006

Course Description:
The course will cover the following topics: bondings and structures; classification of organic compounds; nomenclature and stereochemistry; properties, preparations, reactions and uses of aliphatic and aromatic compounds, organohalogens, alcohols and phenols, aldehydes and ketones, ethers, carboxylic acids and their derivatives, amines, carbohydrates, amino acids, proteins, lipids and nucleic acids. Practical exercises include crystallization, melting point determination, boiling point determination, extraction and chromatography.

Course Objectives:
In order for the students to be well versed in the concepts and the language of organic chemistry, important basic concepts of organic chemistry and as well as some essential practical exercises will be covered in this course.

Course Outline

Week		Topics		Instructor	
	Lecture/Seminar	Hour	Lab	Hour	
1	Bondings, structures, energy	2	Laboratory safety	2	
2	Nomenclature / stereochemistry	4	Boiling points, Distilation	2	
3	Alkanes, Alkenes	4			
4	Alkynes	4	Crystalisation	2	
5	Alkyl halides	4			
6	Alcohols/ethers	4	Melting point	2	
7	Aldehydes/ ketones	4			
8	Carboxylic acids / derivatives	4	Extraction	2	
9	Aromatics/ phenols/amines	4			
10	Carbohydrates	4	Chromatography	2	

11	Amino acids/ protein	4			
12	Lipids/nucleic acid	2	Qualitative (functional groups) analyses	2	
	Total	44		14	

Teaching Methods:

Lecturing

Teaching Media:

Transparencies, handouts and lecturing from boards.

Course Achievement:

Assessment made from the set-forward criteria: student who gets 90% and above will have Grade A.

Course Evaluation:

A suggestive minimum of;

Midterm examination	30%
Final examination	50%
Laboratory performance	20%

References:

John McMurry, Fundamentals of Organic Chemistry, 5th Edition, Thomas Learning, 2003.

John McMurry, Organic Chemistry, 6th Edition, Thomas Learning, 2004.

Laboratory manual

Instructors:

Assistant Professor Dr. Amornsri Chermprapai

Course Coordinator:

Assistant Professor Dr. Amornsri Chermprapai