ประมวลรายวิชา (Course Syllabus)

1.	Course ID	2302682
2.	Course Credit	2
3.	Course Title)	Selected Topic Organic Chemistry II
4.	Department / Faculty	Chemistry / Science
5.	Academic year	2554
6.	Instructors	Assist. Prof. Dr. Paitoon Rashatasakhon Dr. Christopher Smith
7.	Course Condition	
	7.1 Prerequisite	none
	7.2 Corequisite	none
	7.3 Concurrent	none
8.	Course status	Elective
9.	Course curriculum	Master of Science, Doctor of philosophy
10.	Course level	M.Sc. and Ph.D.
11.	Hours per week	2

12. Course Description

First half

Background, mechanism, and application of well-known organic named reactions

Second half

Development and conversion of platform chemicals to products such as fine chemicals, polymers, and other materials

13. Course Outline

13.1 General objectives

To review the background, mechanism, and application of well-known reactions in organic chemistry.

To review the development and conversion of platform chemicals to products such as fine chemicals, polymers, and other materials

13.2 Learning Contents

Date	Contents
Part 1 Organic Named Reactions	
16 Dec 2011	Classification of named reactions - Substitution
23 Dec 2011	Oxidation and Reduction
30 Dec 2011	New-Year holiday
6 Jan 2012	Rearrangement
13 Jan 2012	Olefin chemistry
20 Jan 2012	C-C bond formation
27 Jan 2012	Presentation
30 Jan-3 Feb 2012	Midterm Exam Week (due date for Named Reaction Report)
Part 2 Platform Chemicals from Bio-based Sources: Development and Utilization	
10 Feb 2012	Biorefinery Concept and Biomass Utilisation
17 Feb 2012	1,4 Diacids from Biomass
24 Feb 2012	Furans and furanics
2 Mar 2012	Glycerol and derivatives
9 Mar 2012	Presentation
16 Mar 2012	Lactic acid and derivatives
23 Mar 2012	Biobased Polyols
30 Mar 2012	Value added chemicals from natural oils
2-12 Apr	Final Exam Weeks

13.3 Method of teaching

☑ Lecture 22 hours

❒ Brainstorming

☑ Presentation and discussion 8 hours

13.4 Teaching materials

☑ Transparencies and opaque sheets

☑ Powerpoint media

13.5 Course evaluation

	Part 1 (50%)	Part 2 (50%)
Homework	0	0
Report or Assignment	40	40

Presentation	10	10
Written exam	0	0

14. Textbooks and learning resources

14.1 Required

none

14.2 Recommended

1. All chemical journals
2. Kurti, L. and Czako, B. *Strategic applications of named reactions in organic synthesis*, 2005 Elsevier, USA
3. http://www.organic-chemistry.org/namedreactions/
4. J. J. Bozell and G. R. Petersen, Green Chem., 2010, 12, 539-554.
5. US Department of Energy (2004). Top Value Added Chemicals from Biomass, Vol 1. T. Werpy and G. Petersen, eds.