



YOGYAKARTA STATE UNIVERSITY
FACULTY OF MATHEMATICS AND SCIENCES

SYLLABUS

Faculty : Faculty of Mathematics and Sciences
Study Program : Chemistry Education
Course : History of Chemistry
Credit : 2 sks
Semester : 2
Prerequisite : -
Lecture : Erfan Priyambodo, M.Si.

I. Course Description

This course is design to introduce and discuss a short history of chemistry, from the beginning until the modern of chemistry. In this course, you will learn about the beginning of applied chemical processes. You will also learn about the combustion and the discovery of gases, atomic theory, electrochemistry, etc.

II. Standards of Competence

1. Understanding the beginnings of chemistry.
2. Undersanding the differences between chemistry and alchemy.
3. Understanding the experiment and theory of combustion.
4. Understanding the development of field of chemistry.
5. Determining the great invention in chemistry that influenced human life.

III. Activity

Meeting Number	Basic Competence	Essential Concept	Learning Strategy	Character
1.	The Beginnings of Chemistry	The origins of applied chemistry	Active Learning	
2.	The Beginnings of Chemistry	The diffusion of alchemy	Active Learning	
3.	The Beginnings of Chemistry	Iatrochemistry	Active Learning	
4.	Early Studies on Combustion and the Discovery of Gases	Combustion and the calcination of metals	Active Learning	
5.	Early Studies on Combustion and the Discovery of Gases	The discovery of gases	Active Learning	
6.	The Foundation of Modern Chemistry	Lavoisier's experiments on chemistry	Active Learning	
7.	The Foundation of Modern Chemistry	Laws of combining proportion and the atomic theory	Active Learning	

8.	Midterm exam			
9.	The History of Electrochemistry	The discovery of metals by electrolysis	Active Learning	
10.	The Beginnings of Organic Chemistry	The developmnet of organic chemistry	Active Learning	
11.	The History of Physical Chemistry	The history of physical chemistry	Active Learning	
12.	The periodic law and the stucture of the atom	Thehistory of periodic law	Active Learning	
13.	The periodic law and the stucture of the atom	The structure of the atom	Active Learning	
14.	The Great Invention in Chemistry	The Great Invention in Chemistry	Cooperative Learning	
15.	The Great Invention in Chemistry	The Great Invention in Chemistry	Cooperative Learning	
16.	Final exam			

IV. References

1. Partington, J.R. 1965. *A Short History of Chemistry 3th edition*. New York : MacMillan
2. Another references such as articles on the website or journals.

V. Evaluation

Number	Component	Worth (%)
1.	Participation	5
2.	Assignment	25
3.	Midterm exam	30
4.	Final Exam	40
	Total	100

Yogyakarta, August 15th, 2010

Lecturer

Erfan Priyambodo, M.Si.