
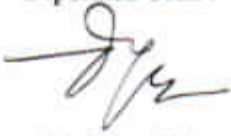

 FPMIPA UPI	<b>SILABUS</b>	No. Dok. : FPMIPA-SE-SL-3 Revisi : 00 Tanggal : 1 Oktober 2010 Halaman : 1 dari 3
	<b>Fundamental of Chemistry          SE 203- 3 Credits          1<sup>st</sup> Semester IPSE</b>	
Dibuat Oleh :  (Dr. Hayat Solihin)	Diperiksa Oleh :  (Dr. Diana R. )	Disetujui Oleh :  (Dr. phil. Ari Widodo)

### Description

Fundamental of Chemistry is general science course and is aimed the students to comprehend the concepts of chemistry in general and to explain any chemical phenomenon in daily life. Several fundamental concepts in studying Chemistry will be discussed. They are introduction to chemistry, description of matter, atomic structure and the periodic table, chemical bonding, chemical equations, stoichiometry, properties of solutions, acids and basis, organic chemistry and functional groups. The approach for this course is a combination of conceptual and inquiry approaches in which students are expected to participate actively in developing the fundamental concepts of Chemistry with lecturers' help. The method will cover exploration, concept formation and concept application, as well as meaning speech, discussion and exercises to detect students concepts. The media are hands-out and LCD. Evaluation will include the attendance, test for each unit, exercises and tasks. Tests for the units will be held three times. The main source is hand-out and Brady, & Humiston, (1990). *General Chemistry: Principles and Structure*; Bodner, & Pardue, (1995). *Chemistry*; Mahan, Myers, & Rollie, (1990). *University Chemistry*. as references.

### Syllabus


1. Course Identity
  - a. Name : Fundamental of Chemistry
  - b. Code Number : SE 203
  - c. Credit(s) : 3
  - d. Grade : 1<sup>st</sup> grade, on 1<sup>st</sup> semester
  - e. Group : GSC (General Science Course)
  - f. Program : IPSE-FPMIPA/S-1
  - g. Prerequisite : -
  - h. Lecturer : Dr. Hayat Solihin, M.Sc.,  
Tuszie Widhiyanti, M.Pd.

### 2. Goal

After attending this course, students are expected to know the concepts of chemistry in general to explain any chemical phenomenon in daily life.

### 3. Content

Here several fundamental concepts in studying Chemistry will be discussed. They are introduction to chemistry, description of matter, atomic structure and the periodic table, chemical bonding, chemical equations, stoichiometry, properties of solutions, acids and basis, organic chemistry and functional groups

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#### 4. Learning Activities

The approach for this course is a combination of inquiry and conceptual approach in which students are expected to participate actively in developing the fundamental concepts of Chemistry with lecturers' help. The method will cover learning cycle and meaning speech, discussion and exercises to detect students concepts. The media are hands-out and LCD.

#### 5. Assessment

Evaluation will include the attendance, tests for each unit, exercise and tasks. Assesment could also change due to lecturer's policy.

#### 6. Meeting's Agenda

1<sup>st</sup> meeting : Lecture Guide and Study Contract; Introduction to chemistry

2<sup>nd</sup> meeting : Description of matter

3<sup>rd</sup> meeting : Atomic structure and the periodic table

4<sup>th</sup> meeting : Atomic structure and the periodic table

5<sup>th</sup> meeting : Chemical bonding

6<sup>th</sup> meeting : Test 1

7<sup>th</sup> meeting : Chemical equations

8<sup>th</sup> meeting : Stoichiometry

9<sup>th</sup> meeting : Stoichiometry

10<sup>th</sup> meeting: Test 2

11<sup>th</sup> meeting: Properties of solutions

12<sup>th</sup> meeting: Properties of solutions

13<sup>th</sup> meeting: Acids and basis

14<sup>th</sup> meeting: Organic chemistry and functional groups

15<sup>th</sup> meeting: Organic chemistry and functional groups

16<sup>th</sup> meeting: Test 3

#### 7. References

Bodner, G.M., and Pardue, H.L., (1995). *Chemistry*, 2<sup>nd</sup> edition, New York: John Wiley & Sons, Inc.

Brady, J.E. and Humiston, (1990). *General Chemistry: Principles and Structure*, 5<sup>nd</sup> edition, New York: John Wiley & Sons, Inc.

Ebbing, D. D. and Wrighton, M.S.,(1990). *General Chemistry*, 3<sup>rd</sup> edition, Boston: Houghtoun Mifflin Co.

Mahan, B.M., Myers, and Rollie, J. (1990). *University Chemistry*, Fourth edition, Boston: The Benjamin/Cumming Pub. Co.

Oxtoby, D.W., dan Nachtrieb, N.H., (1987). *Principles of Modern Chemistry*, Philadelphia: Saunders College Publishing.

Zumdahl S.S., (1992). *Chemistry*, 2<sup>nd</sup> edition, Lexington: D.C. Heath Co.