



**YOGYAKARTA STATE UNIVERSITY
FACULTY OF MATHEMATICS AND NATURAL SCIENCES**

SYLLABI

FRM/FMIPA/063-00
1 April 2010

Faculty : Faculty of Mathematics and Natural Science
Study Program : Science Education
Course / Code : Labwork of Basic Science/102
Credit : Practice:1
Semester : 1
Prerequisite/Code : --
Lecturer :Purwanti Widhy H, M.Pd& Susilowati, M.Pd

I. Course Description

Mata praktikum ini untuk mengembangkan keterampilan menggunakan metode ilmiah dalam mengkaji IPA untuk memperoleh fakta, konsep dan hukum IPA, serta nilai-nilai ilmiah

II. Standard of Competence

Understanding the definition of science from many perspective (Science as way of Thinking, Science as way of investigating, and science as body of knowledge), applying scientific method to solve various problems in everyday life, and understanding the interactions between science, technology and society

III. Activity

Meeting	Basic Competence	Activity	Learning Materials/References	Character
1		Introduction		
2 11 september 2013	Understand characteristic of science	Mencari fenomena yang sesuai dengan karakteristik ilmu pengetahuan, memilih fenomena sebagai permasalahan.	B.3	Curiosity, Religiosity

3 18 september	Understand to look for the problem	Merumuskan masalah berdasarkan fenomena yang dipilih. Mencari referensi yang sesuai dengan permasalahan Membuat hipotesis	A.1, B.1, B.2, B.3	appreciation of diversity, confidence
4 25 sept	Design the experiments	Merancang percobaan berdasar permasalahan	A1, B1, B3	Thinking logically, critically, creatively, and innovatively
5 2 oktober	Do experiment	Melakukan eksperimen	B.3	Thinking logically, critically, creatively, and innovatively
6 9 oktober	Communicating the result of experimen	Menganalisis hasil eksperimen, membuat grafik/tabel, membuat kesimpulan dan mengkomunikasikan hasil eksperimen	A1, B1, B3	Thinking logically, critically, creatively, and innovatively
7 16 oktober	Communicating the result of experimen	Presentasi		Thinking logically, critically
8 23 oktober	Communicating the result of experimen	Presentasi		Thinking logically, critically
9 30 oktober	Understand to look for the problem	Pemilihan tema (elektrolisis, resistensi bahan alami, model pernafasan makhluk hidup, cacat mata) Membuat latar belakang dan rumusan masalah tema yang dipilih	B2, B 4, B5, B6	Curiosity, Religiosity
10 6 november	Understand to look for the problem	Membuat kaji referensi dan hipotesis dari tema yang dipilih	A1, B1, B3	appreciation of diversity, confidence

11 13 november	Design the experiments	Desain eksperimen	A1, B1, B3	Thinking logically, critically, creatively, and innovatively
12 20 november	Do the experiments	Melakukan eksperimen	A1, B1, B3	Thinking logically, critically, creatively, and innovatively
13 27 november	Communicating the result of experimen	Menganalisis hasil eksperimen, membuat grafik/tabel, membuat kesimpulan dan mengkomunikasikan hasil eksperimen	A1, B1, B3	Thinking logically, critically, creatively, and innovatively
14 4 desember	Communicating the result of experimen	Presentasi 1		Thinking logically, critically
15 11 desember	Communicating the result of experimen	Presentasi 2		Thinking logically, critically
16 18 desember		responsi		

IV. Reference

A. Compulsory

1. Hewitt, Paul G et al.(2007). *Conceptual Integrated Science*. San Francisco: Pearson Educations, Inc.

B. Additional

1. Chiappetta, Eugene L. (2010). *Science Instructional in The Middle and Secondary schools*. Boston : Pearson Educations, inc.
2. Griffith, Thomas. (2007). *The Physic of everyday phenomena*. New York: McGraw-Hill.
3. University of California. (2010). *Understanding science: How science really work?*. Accessed from <http://undsci.berkeley.edu/> on August 10, 2010.
4. Brown, Theodore,et. Al. 1976. *Chemistry the central science*. Perason: Pearson Pertice Hall.

5. Solomon, Berg, dan Martin.2008. *Biology*. Thompson Brooks/Cole
6. Resnick, Haliday. 1983. Fisika Jilid 3. Jakarta: Erlangga.

V. Evaluation

No	Componen	Worth
1	Participation	25 %
2	Assignment	35 %
3	Final Exam	40%
		100%

Yogyakarta, september 2013

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