


 FPMIPA UPI	SILABUS	No. Dok. : FPMIPA-SE-SL-06 Revisi : 00 Tanggal : 1 Oktober 2010 Halaman : 1 dari 3
	Philosophy of Science SE 301 – 2 credits 1st Semester IPSE	
Dibuat Oleh :  (Drs. Yusuf Hilmi, M.Sc.)	Diperiksa Oleh :  (Dr. Diana R.)	Disetujui Oleh :  (Dr. phil. Ari Widodo)

Description

Philosophy of Science is compulsory course for IPSE and is aimed to broaden students knowledge and mind/perception. It covers the nature of human being, history of Science, objectivity and truth, the nature of science, scientific thinking and explanation towards nature and reality; language, mathematics, and statistics as vehicle of scientific thinking; meaning and scientific reasoning. Lecturing, discussion, and presentation are used as methods in delivery the content, Conceptual and inquiry approaches are used interchangeably. Summarizing and make comments as assignment, mid term and final tests/exams are used in evaluation. The main sources of this course are: Kuhn, T.S., (2000). *The Structure of Scientific Revolutions*; Suriasumantri, J. S., (1982). *Ilmu dalam Perspektif*.

Syllabus

1. Course Identity


- | | |
|-------------------|--|
| a. Name | : Philosophy of Science |
| b. Code | : SE301 |
| c. Credit (s) | : 2 credits |
| d. Grade | : 1 st grade, on 1 st semester |
| e. Classification | : BCS |
| f. Program | : IPSE-FPMIPA UPI/ S-1 |
| g. Statue | : compulsory |
| h. Prerequisite | : --- none |
| i. Lecturer | : Yusuf Hilmi Adisendjaja, Drs., M.Sc.(0517) |

2. Goal

To improve student teachers way of thinking and have good emphaphy towards science and their process.

3. Content

Human being as thinking creature; components of Philosophy; ways of Scientific thinking; the history and the nature of science; philosophy of science as sources of science and truth, foundation of reasoning, ontology, epistemology and interpretation of reality, causality and regularity; language and mathematics as tools for scientific reasoning (logic,

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symbol, system and scientific theory, scientific explanation, the nature of knowledge and science.

4. Learning Activities

- Method(s) : Lecture, presentation. And discussion.
- Approach(s) : Conceptual and Inquiry approach
- Assignment : Make summary and comment
- Media : OHP& OHT, internet search, Power point & LCD.

5. Assessment

- Assignments
- Mid Term Test/Exam
- Final Test/Exam
- Lecturer's policy

6. Meeting's Agenda:

- 1st Meeting : Introduction and coverage of the course
- 2nd Meeting : The nature of human being as thinker; its characteristics as social being.
- 3rd Meeting : Components of Philosophy (ontology, epistemology, axiology)
- 4th Meeting : Ontology and Axiology
- 5th Meeting : Epistemology; Science as ways of knowing.
- 6th Meeting : The History of Science


- 7th Meeting : The nature of Science (product, process, value and attitude)
- 8th Meeting : Mid term test/exam
- 9th Meeting : Common sense, scientific thinking, scientific theory and explanation
- 10th Meeting : Reasoning, Logic and Truth
- 11th Meeting : Objectivity, Reality and the nature of object reality
- 13th Meeting : The law of Causality; Regularity, pattern in nature
- 14th Meeting : Language, Mathematics and Statistics as vehicle for scientific thinking
- 15th Meeting : Logic in Mathematics and Language (symbol, system)
- 16th Meeting : Meaning and the use of Scientific Reasoning

7. References

Main sources:

Bakhtiar, A.,(2006). *Filsafat Ilmu*. Jakarta: Radja Grafindo Persada.

Kuhn, T.S., (2000). *The Structure of Scientific Revolutions (Peran Paradigma dalam Revolusi Sains)*. Bandung: Remadja Rosdakarya.

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Suriasumantri, J. S., (1982). *Ilmu dalam Perspektif*. Jakarta: Gramedia.

Suriasumantri, J. S., (1988). *Filsafat Ilmu: Sebuah Pengantar Populer*. Jakarta: Pustaka Sinar Harapan

Other sources:

Semiawan, C., Setiawan, Th.I., & Yufiarti (2005). *Panorama Filsafat Ilmu: Landasan Perkembangan Ilmu Sepanjang Jaman*. Bandung: Mizan Media Utama.

Semiawan, Putrawan, I.M., & Setiawan, Th.I. *Dimensi Kreatif dalam Filsafat Ilmu*. Bandung: Remaja Rosdakarya.

Montero, B., (2009). *On the Philosophy of Mind*. Belmont, C, USA: Wardsworth, Cengage Learning.

Ferreira, P., (1999). *Bradley and The Structure of Knowledge*. Albany: State University of New York Press.