Module Handbook

Modul Name	**Philosophy of Science**
Module Level	Bachelor
Abbreviation, if applicable	3074212025
Sub-heading, if applicable	-
Course included in the module, if applicable	-
Semester/term	3rd/ second year
Modul coordinator(s)	Prof. Dr. Sari Edi C, M.Si., ; Dr. Nuniek Herdyastuti, M.Si
Lecturer(s)	Prof. Dr. Suyono, M.Pd. ; Dr. Harun Nasrudin, M.S., ; Samik, S.Si., M.Si
Language	Bahasa Indonesia
Classification within the curriculum	Compulsory
Teaching format/class hours per week during the semester	2 hours lectures (50 min / hour)
Workload	2 hours lecture, 2 hours structured activities, 2 hours individual activities, 14 week a semester, and total 112 hours a semester ~4.48 ECTS *
Credit point	2 SCU
Requirement	-
Learning Outcomes	**General Competence (knowledge)**: Students are able to apply logical, critical, systematic and innovative thinking in the context of the development or implementation of natural science, especially chemistry **Spesific Competence** : At the end of the lecture, students are able to correct and comprehensive reasoning in gaining an understanding of science and students have knowledge in defining natural science comprehensively, classifying scientific products, developing concepts, understanding scientific methods, distinguishing the flow of thinking in science, developing syllogism, and showing the role of tools of science in the development of science.
Content	The study of the flow of thinking in science, philosophical questions of science (ontology, epistemology, and axiology), the role of science tools, and scientific components (scientific products, scientific methods, and scientific attitudes) in the field of Natural Sciences especially chemistry and its implementation in religious life. This study is carried out through lectures, discussions, practices, presentations, and chapter reports.
Study/exam achievements	Students are considered to be competent and pass if at least get 55 Final score is calculated as follows: 20% participation + 30% assignment + 20% middle exam (UTS) & 30% final exam (UAS)

	Tableindex of graduation • A = 4 (85 ≤-≥ 100) • A- = 3,75 (80 ≤-< 85) • B+ = 3,5 (75 ≤- < 80) • B = 3 (70 ≤-< 75) • B- = 2,75 (65 ≤-<75) • C+ = 2,5 (60 ≤-<65) • C = 2 (55 ≤-<60) • D = 1 (40 ≤-<55) • E = 0 (0 ≤-<40)
Forms of media	Computer, LCD, White board
Learning Methods	Lectures, discussion, assignment and chapter report
Literatur	1. Materi Dasar Pendidikan Program Akta Mengajar V. 1985. *Buku IA Filsafat Ilmu*. Jakarta: Departemen Pendidikan dan Kebudayaan, Universitas Terbuka. 2. Bunge, Mario. 2007. *Philosophy of Science from Explanation to Justification.* London: Transaction Publishers. 3. McLelland, Christine V. 2006. *The Nature of Science and The Scientific Method.* USA: *The Geological Society of America*. 4. Dane, F.C. 2010. *Evaluating Research: Methodology for People Who Need to Read Research* (Chapter 2: *The Scientific Approach)*. California: SAGE Publication, Inc. 5. Herron, J.D. et al. 1977. *Problems Associated with Concept Analysis. Science Education* 61(2). P. 185-199 6. Camarinha, L. M. & Matos. (tanpa tahun). *Scientific Research, Methodologies and Techniques*. cam@uninova.pt 7. *The Scientific Approach in Education*
Note	1. This course is divided into two parallel classes with the materials and ingredients but given the same test in the same time with same lecturers. 2. Total ECTS = {(total hours workload x 50 min) / 60 min } / 25 hours **Each ECTS is equals with 25 hours**