



UNIVERSITAS NEGERI YOGYAKARTA
FACULTY OF MATHEMATICS AND NATURAL SCIENCES
DEPARTMENT OF CHEMISTRY EDUCATION
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Bachelor of Education in Chemistry

MODULE HANDBOOK

Module name:	Insight and Analysis of Natural Science Materials
Module level, if applicable:	Undergraduate
Code:	AMF6201
Sub-heading, if applicable:	-
Classes, if applicable:	2
Semester:	2 nd
Module coordinator:	Sukisman Purtadi, M.Pd
Lecturer(s):	Erfan Priyambodo, S.Pd.Si.,M.Si.; Anggiyani Ratnaningtyas Eka Nugraheni, S.Pd.Si.,M.Pd.
Language:	Bahasa Indonesia and English
Classification within the curriculum:	Compulsory Subject
Teaching format / class hours per week during the semester:	100 minutes lectures, 120 minutes structured activities, and 120 minutes individual study per week.
Workload:	Total workload is 90.67 hours per semester which consists of 100 minutes lectures, 120 minutes structured activities, and 120 minutes individual study per week for 16 weeks.
Credit points:	2 SKS (3.28 ETCS)
Prerequisites course(s):	-
Course Outcome:	After taking this course, the students are expected to be able to: CO1. Show an attitude of responsibility in doing their work independently CO2. Explain natural phenomena between biological, chemical, physical aspects in an integrated manner according to their scientific fields; analogize natural events and their principles in macro and micro as a means of educating themselves in accordance with scientific philosophy between epistemological and axiological ontologism; calculate the standard deviation and error of the experimental results; and understand the role of chemistry as a center for other natural sciences
Content:	This lecture includes theories about how to integrate various scientific sciences for the benefit of the development of chemistry. The course consists of photosynthesis and the biological chain, science philosophy, scientific method and logic, scientific attitude and character as a base of educational worker in the society, the role of chemistry as a center for other natural sciences, and the role of education in technology research and development.
Study / exam achievements:	Attitude assessment is carried out at each meeting by

	<p>observation and/or self-assessment techniques using the assumption that basically every student has a good attitude. The student is marked very good or not good attitude if they show it significantly compared to other students in general. The final mark will be weight as follow:</p> <table border="1"> <thead> <tr> <th>No</th> <th>CO</th> <th>Assessment Object</th> <th>Assessment Technique</th> <th>Weight</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>CO1, CO2.</td> <td>Assignments Mid-term Exam Final Exam Participation</td> <td>Presentation and Written Task/ Test.</td> <td>40% 20% 20% 20%</td> </tr> <tr> <td colspan="4">Total</td> <td>100%</td> </tr> </tbody> </table>	No	CO	Assessment Object	Assessment Technique	Weight	1	CO1, CO2.	Assignments Mid-term Exam Final Exam Participation	Presentation and Written Task/ Test.	40% 20% 20% 20%	Total				100%
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1	CO1, CO2.	Assignments Mid-term Exam Final Exam Participation	Presentation and Written Task/ Test.	40% 20% 20% 20%												
Total				100%												
Forms of media:	Board, LCD Projector, Laptop/Computer															
References:	<p>Peter Soedjo (2004) <i>Pengantar Sejarah dan Filsafat Ilmu Pengetahuan Alam</i> Yogyakarta: Gadjah Mada University Press.</p> <p>Jujun Suriasumantri (2007) <i>Filsafat Ilmu Sebuah Pengantar Popular</i> Jakarta: Pustaka Sinar Harapan.</p> <p>Sandler R L (2009) <i>Character and Environment</i> Columba University Press.</p> <p>Dauvin J C & Duhamel J C (2010) <i>Biological Heritage and Food Chains</i> QUAEd Ed May 3rd 2010.</p> <p>Rosenberg A (2011) <i>Philosophy of Science 3rd Ed</i> Routledge Publisher.</p> <p>Tarski A (2013) <i>Introduction to Logic and to the Methodology of Deductive Sciences</i>. Martino Fine Books.</p> <p>Article on the magazines, journal, and other related resource.</p>															

PLO and CO mapping

	PLO					
	Attitude		Knowledge	Specific Skill	General Skill	
	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6
CO1						√
CO2			√		√	