



UNIVERSITAS NEGERI YOGYAKARTA
FACULTY OF MATHEMATICS AND NATURAL SCIENCES
DEPARTMENT OF CHEMISTRY EDUCATION
Jl. Colombo No. 1, Karangmalang, Yogyakarta
Phone : +62 274 548203 e-mail: kimia@uny.ac.id
Website: pendidikankimia.fmipa.uny.ac.id

Bachelor of Education in Chemistry

MODULE HANDBOOK

Module name:	Geochemistry
Module level, if applicable:	Undergraduate
Code:	KMA6249
Sub-heading, if applicable:	-
Classes, if applicable:	-
Semester:	Odd
Module coordinator:	Sukisman Purtadi, M.Pd.
Lecturer(s):	Sulistyani, M.Si.
Language:	Bahasa Indonesia and English
Classification within the curriculum:	Elective Course
Teaching format / class hours per week during the semester:	Lectures: 100 minutes lectures, 120 minutes structured activities and 120 minutes individual study per week
Workload:	Total workload of the activity is 136 hours per semester which consist of 100 minutes lectures, 120 minutes structured activities, 120 minutes individual study per week.
Credit points:	2SKS (3.28 ECTS)
Prerequisites course(s):	Basic Chemistry
Course Outcomes	After taking this course the students are expected to be able to: CO1. understand the basic concepts of geochemistry CO2. analyze the elements and species of atoms (isotopes) on earth, as well as the distribution and transfer of elements in several parts of the earth CO3. compile written ideas related to geochemistry based on the results of analysis of the elements and species of atoms (isotopes) on earth, as well as the distribution and transfer of elements in some parts of the earth (atmosphere, hydrosphere, earth crust etc).
Content:	This lecture includes theories covering following material; the principles and history of geochemistry, earth and relations with the universe, the structure and content of the earth, thermodynamics and chemical crystals, magmatism and igneous rocks, sedimentation and sedimentary rocks, and isotope geochemistry.
Study/exam achievements:	Attitude assessment is carried out at each meeting by observation and / or self-assessment techniques using the assumption that basically every student has a good attitude. The student is given a value of very good or not good attitude if they show it significantly compared to other students in

	<p>general. The result of attitude assessment is not a component of the final grades, but as one of the requirements to pass the course. Students will pass this course if at least they show a good attitude. The final mark will be weighted as follows:</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, CO3.</td> <td>Performance Individual and Group Assignment Mid-term Exam Final Exam</td> <td>Observation Presentation / written task Written test</td> <td>10% 30% 30% 30%</td> </tr> <tr> <td colspan="4">Total</td> <td>100%</td> </tr> </tbody> </table>	No	CO	Assessment Object	Assessment Technique	Weight	1	CO1, CO2, CO3.	Performance Individual and Group Assignment Mid-term Exam Final Exam	Observation Presentation / written task Written test	10% 30% 30% 30%	Total				100%
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Total				100%												
Forms of media:	Board and Board markers, LCD Projector, Laptop/Computer, Modules															
References:	<p>Handbooks:</p> <p>A. Misra, K. C. 2012. <i>Introduction to Geochemistry: Principles and Applications</i>. Wiley Blackwell</p> <p>B. Hibbard, M.J., Mineralogy. 2002. <i>A geologist point of view</i>, Boston: Mc Graw Hill.</p> <p>C. Nesse, W.D.2000. <i>Introduction to Mineralogy</i>. New York: Oxford University Press.</p> <p>D. Pellant, C. 1992. <i>Rocks and Minerals</i>. New York: Dorling Kindersley, Inc.</p> <p>Suggested Readings:</p> <p>A. Berry, L.G., & Mason, B.H. 1983. <i>Mineralogy, 2nd edition</i>, New York: Freeman.</p> <p>B. Hammond, C. 1990. <i>Introduction to Crystallography</i>. Oxford: Oxford University Press.</p>															

PLO and CO mapping

	PLO					
	Attitude		Knowledge	Specific Skill	General Skill	
	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6
CO1			√			
CO2			√			
CO3					√	