

## Module Handbook

Module Name:	<b>Mineralogy</b>
Module Level:	Bachelor
Abbreviation, if applicable:	KII 205
Sub-heading, if applicable:	-
Courses included in the module, if applicable:	-
Semester/term:	3 <sup>rd</sup> / Second Year
Module coordinator(s):	Dr. Hartati
Lecturer(s):	Ahmadi Jaya Permana, S.Si, M.Si
Language:	Bahasa Indonesia
Classification within the curriculum	Compulsory Course / <del>Elective Studies</del>
Teaching format / class hours per week during semester:	2 hours lectures (50 min / hour)
Workload:	2 hours lectures, 2 hour structural activities, 2 hours individual study, 13 week per semester, and total 78 hours per semester ~ 2.6 ECTS *
Credit Points:	2
Requirements:	General Chemistry II
Learning goals/competencies:	<p><b>General Competence (knowledge) :</b> Being able to deduce the structure of the crystal geometry, nature and type of minerals</p> <p><b>Specific Competence:</b></p> <ol style="list-style-type: none"> <li>1. Able explains the history of mineralogy, the way the analysis X-ray diffraction, chemical and physical properties of minerals and the formation of rocks and minerals,</li> <li>2. Being able to discern the structure and geometry of the crystal crystal sertakelas</li> <li>3. Being able to discuss the classification of mineral and gemology</li> <li>4. Ability to design decorative ornaments of mineral crystals and natural stones and precious stones for jewelry</li> </ol>
Content:	In the course of coordination chemistry will discuss the history of mineralogy, structural geometry of the crystal, the crystal classification, analysis by X-ray diffraction, chemical and physical properties of minerals, rocks and minerals process of formation, classification of minerals and gemological.
Attribut soft skill	Communication skill and team-work
Study/exam achievements:	<p>Students are considered to be competent and pass if at least get 55</p> <p>The final value is calculated as follows: Middle Semester Exam (UTS) = 35%; Final Examination Semester (UAS) = 35%, Structured work = 20%; Softskill = 10%</p> <p>Table Value Graduation A: 100 &gt; NA ≥ 75</p>

	AB: 74.9> NA≥70 B: 69.9> NA≥65 BC: 64.9> NA≥60 C: 59.9> NA≥55 D: 54.9> NA≥40 E: 39,9≥NA
Forms of Media:	Slides and LCD projectors, whiteboards
Learning Methods	Lecture, Discussion, Group presentation
Literature:	<ol style="list-style-type: none"> <li>1. Hartati, 2003, <b><i>Bahan Ajar: Mineralogi</i></b>, Jurusan Kimia FMIPA Universitas Airlangga</li> <li>2. Hurlbut, C.S., 1971, <b><i>Dana's Manual of Mineralogy</i></b>, 18<sup>th</sup> edition, John Wiley &amp; Sons, Inc., New York</li> <li>3. Kraus, EH and Hunt, WP, 1959, <b><i>Mineralogy</i></b>, McGraw Hill Company, New York</li> <li>4. Phillips, WJ and Phillips, N., 1980, <b><i>An Introduction to Mineralogy for Geologist</i></b>, John Wiley &amp; Sons, New York</li> <li>5. Hartati, 1998, <b><i>Modul IBA: Hiasan Dekoratif dari Mineral Kristal dan Batu Alami</i></b>, Jurusan Kimia FMIPA Universitas Airlangga</li> <li>6. Hartati, 2003, <b><i>Modul IBA: Merancang Batu Mulia untuk Perhiasan</i></b>, Jurusan Kimia FMIPA Universitas Airlangga</li> </ol>
Notes:	*Total ECTS = {(total hours workload x 50 min ) / 60 min } / 25 hours <b>Each ECTS is equals with 25 hours</b>