FI140 Basic Concepts of Earth and Space

Module name:	Basic Concepts of Earth and Spa	ice				
Module level, if applicable:	Undergraduate					
Code:	FI140					
Sub-heading, if applicable:	-					
Classes, if applicable:						
Semester:	3 rd					
Module coordinator:	Judhistira Aria Utama					
Lecturer(s):	Judhistira Aria Utama and Nanang Dwi Ardi					
Language:	Bahasa Indonesia					
Classification within the curriculum:	Compulsory course					
Type of Teaching	Contact hours per week during the semester	Class Size				
 Lecture (conceptual, contextual and problem-solving approaches through expository, discussions and exercises). Structured activities (assignments based on conceptual, contextual and problem-solving approaches) Self-study (reading literature) 	2 hours and 30 minutes	35				
Workload:	Total workload is 136 hours (4.8 ECTS) per semester which consists of 150 minutes lectures and a week for geology field camp (1.2 ECTS), 180 minutes structured activities (1.5 ECTS), and 180 minutes self-study per week for 14 weeks (1.5 ECTS), 150 minutes for each exam (0.2 ECTS), and 360 minutes for each exam preparation (0.4 ECTS).					
Credit points:	4.8 ECTS					
Pre-requisites course(s):	-					
Course Learning Outcomes (CLO):	CLO1: Explain Earth structu CLO2: Explain rock and mir CLO3: Explain plate tectonic CLO4: Explain earthquake r CLO5: Explain volcanism CLO6: Explain hydrosphere CLO7: Explain atmosphere	CLO2: Explain rock and mineral identification CLO3: Explain plate tectonics concept and its measurement CLO4: Explain earthquake mechanism CLO5: Explain volcanism CLO6: Explain hydrosphere character CLO7: Explain atmosphere layer and process CLO8: Explain astronomy as a science observation				

Content:	CLO10: Explain basic concept of photometry CLO11: Explain basic concept of spectroscopy CLO12: Explain characteristic of solar system Explain galaxy morphology and universe formation model Earth system, rock and mineral, plate tectonics, earthquake, volcanism, hydrosphere, atmosphere, astronomy observation, introduction to astrometry, introduction to photometry, introduction to spectroscopy, solar system and planetary system, HS Diagram and Big Bang Model							
	The final mark v	Assessment Object	Assessment Techniques	Weight				
Study/exam achievements:	1	Subject specific competences: a. Assignments b. Worksheets c. Exam - Mid exam - Final exam	Written Written Written test Written test	15% 25% 30% 30% 100%				
Forms of media:	Board, LCD Projector, Laptop/Computer, stream video conference, rock samples							
Literature:	 Plummer, C. C., Carlson, D. H., & Hammersley, L. (2016). <i>Physical Geology, 15th edition.</i> McGraw – Hill Education, New York. Rothery, D. (2015). <i>Geology Complete Introduction.</i> McGraw – Hill Companies, Inc. United Kingdom Holt, Rinehart and Winston, <i>Earth Science, Interactive Textbook.</i> A Harcourt Education Company, Austin. Jain, P. (2015). <i>An Introduction to Astronomy and Astrophysics.</i> CRC Press, Boca Raton. Kutner, M.L. (2003). <i>Astronomy: A Physical Perspective, 2nd Edition.</i> Cambridge University Press. Pankaj Jain. (2015). An introduction to <i>astronomy</i> and astrophysics. Crc Press/Taylor & Francis Group. 							

PLO and CLO mapping

	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10	PLO11	PLO12
CLO1		V										
CLO2												
CLO3												
CLO4												
CLO5		$\sqrt{}$										
CLO6		$\sqrt{}$										
CLO7		$\sqrt{}$										
CLO8												
CLO9												
CLO10		$\sqrt{}$										
CLO11												
CLO12		$\sqrt{}$										
CLO13												