Module Descriptions

Module designation	*8420302099*
Semester(s) in which the module is taught	*6*
Person responsible for the module	*Mita Anggaryani, M.Pd., Ph.D.*
Language	Indonesian
Relation to curriculum	*Compulsory ~~/ elective / specialisation~~*
Teaching methods	*Lecture, Lesson, Discussion, case study ~~lab works~~, ~~project~~, ~~seminar~~*
Workload (incl. contact hours, self-study hours)	*(Estimated) Total workload: 136 work hours per-semester* *Contact hours (please specify whether lecture, exercise, ~~laboratory session, etc.~~): 40 work hours per-semester* *Private study including examination preparation, specified in hours: 94 work hours per-semester*
Credit points	3.18 ECTS
Required and recommended prerequisites for joining the module	-

Module objectives/intended learning outcomes	*Key question: what learning outcomes should students attain in the module?* *E.g. in terms of:* - *Attitude:* a) *Demonstrates a resilient, collaborative, adaptive, innovative, inclusive, lifelong learning, and entrepreneurial character.* b) *Demonstrates religious, national and cultural values, as well as academic ethics in carrying out their duties.* - *Competences -* - *Knowledge:* a) *Masters and demonstrates the principles of classical and modern physics theory.* b) *Formulates physical symptoms and problems based on the results of observations and experiments, and model them using mathematics and computing for appropriate decision making in both familiar and new problems.* c) *Masters the pedagogical knowledge in planning, teaching, and evaluating physics learning as well as resource management in organizing classes, physics laboratories and educational institutions.* - *Skills:* a) *Develops logical, critical, systematic and creative thinking in carrying out specific work in the field of expertise and in accordance with the work competency standards in the relevant field.* b) *Develops self sustainably and collaborate.* c) *Masters the principles of developing physics learning media based on science, contextual technology, especially ICT (information and communication technology), and the surrounding environment.*
Content	*This course covers: the history of planet Earth, Earth's system and structure, large-scale system interactions and plate tectonics, natural disasters, disaster mitigation, volcanology, the origin of the universe, the Solar System, Earth within the Solar System, Earth's atmosphere, solar radiation, planetary threats, and efforts to protect the planet. This course is intended for students who have completed Basic Physics I. Learning activities are conducted using a project-based learning model with an exploratory case study approach, implemented both in the classroom and through fieldwork. The learning process is supported by the VLP volcano simulation software that has been developed, along with other relevant software tools.*
Examination forms	*Project*
Study and examination requirements	***Requirements for successfully passing the module:*** a) *Minimum attendance of 75%* b) *Minimum score of 55 out of 100*

Reading list	a) *McConnelll David and Steer David (2013), 1CThe Good Earth 1D , Introductory to Earth Science, Third Edition, Pergamon Press.* b) *Madlazim, Supriyono dan MNR Jauhariyah (2014). 1C Ilmu Pengetahuan Bumi dan Antariksa 1D. Diktat Kuliah IPBA.* c) *Farndon, J. et al. 2003. Planet Earth. London, UK: Lorenz Books. http://www. fisikaunesa. net/vi-learninghttp://ocw. mit. edu/courses/#earth-atmospheric-and-planetary-sciences* d) *Tjasyono, B. 2017. Sains Kebumian dan Antariksa Pendekatan Multidisipliner. Surabaya: Unesa Press.*