PROGRAM PLAN AND SEMESTER LEARNING ACTIVITIES (RPKPS) SCHOOL YEAR 2021/2022

Physical Geophysics

Seismic Stratigraphy

MFG 4619/ 2 credits

Mentoring Team:

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UNIVERSITAS GADJAH MADA FACULTY OF MATHEMATICS AND NATURAL SCIENCES
2021

	Gadjah Mada University Faculty of Mathematics and Natural Sciences Department of Physics / S1 Geophysics Study Program Academic Year 2021/2022	**Document Code:** .....

SEMESTER LEARNING PROGRAM AND ACTIVITY PLAN (RPKPS)

Course Code	Course Name	Weight (credit)		Semester	Course Status	Prerequisite Courses
MFG 4619	*Seismic Stratigraphic*	*T: 2*	*P: -*	*Odd*	*Choice*	*MFG-2117*

Course Brief Description	It is an MKP selection course in the Geophysics study program, for 7th semester students. After attending this lecture: 1. Students are able to understand the process of processing seismic data for stratigraphic study purposes. 2. Students are able to carry out the stratigraphic interpretation process, with software or manually, and are able to make various derivatives of seismic and stratigraphic attribute data 3. Students Students are able to understand stratigraphic papers, study and deliver them.	
Graduate Learning Outcomes (CPL) Charged to MK	***CPL-3***	**Operational and comprehensive skills**: Graduates are able to apply all geophysical methods (seismic, gravitational, magnetic, electrical, electromagnetic, and thermic methods) for energy exploration (e.g. oil and gas, coal, geothermal), mining materials (eg: iron, copper, gold, silver, tin) as well as groundwater and disaster mitigation
	CPL-4	**Application and analysis skills**: Graduates are able to carry out and manage a geophysical survey which includes scientific steps in the acquisition, processing and interpretation of data for the exploration of natural resources both for energy (e.g. oil and gas, coal, for energy exploration (e.g. oil and gas, coal, geothermal), mining materials (eg: iron, copper, gold, silver, tin) as well as groundwater and disaster mitigation
	CPL-6	**Managerial skills and self-development**: Graduates are able to update their competencies, namely by life-long learning in line with the latest geophysical conditions to compete nationally and internationally by upholding UGM values (Pancasila: Divinity, Humanity, Unity, Peoplehood, Justice, and Science: universality, objectivity, freedom, respect for reality and truth)
Course Learning Outcomes (CPMK)	**After completing the learning of this course, students are expected to be able to:**	
	CPMK-1	understand the process of processing seismic data for stratigraphic studies [CPL-3]
	CPMK-2	Students are able to carry out the stratigraphic interpretation process, with software or manually, and make various derivatives of seismic and stratigraphic attribute data
	CPMK-3	Students are able to understand stratigraphic papers, study and deliver them [CPL-6]

<table>
<tr><td>CPL Mapping with CPMK</td><td colspan="4">
<table>
<tr><th></th><th>CPMK1</th><th>CPMK2</th><th>CPMK3</th></tr>
<tr><td>CPL-3</td><td>√</td><td></td><td></td></tr>
<tr><td>CPL-4</td><td></td><td>√</td><td></td></tr>
<tr><td>CPL-6</td><td></td><td></td><td>√</td></tr>
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</td></tr>
<tr><td rowspan="10">CPMK link with Learning Material and Form, as well as Time Allocation</td><td></td><td>Learning Materials</td><td>Forms of Learning</td><td>Time Allocation</td></tr>
<tr><td>CPMK1</td><td>Stratigraphy 1 : Introduction, RPKPS,</td><td>TCL - SCL mixed</td><td>2 Hours</td></tr>
<tr><td>CPMK1</td><td>Stratigraphy 2 : Deposition and stratigraphy of clastic and non-clastic</td><td>TCL - SCL mixed</td><td>2 Hours</td></tr>
<tr><td>CPMK1</td><td>Stratigraphy 3: Stages of stratigraphic interpretation</td><td>TCL - SCL mixed</td><td>2 Hours</td></tr>
<tr><td>CPMK2</td><td>Stratigraphy 4 : Termination of reflection and sequence of deposition</td><td>TCL - SCL mixed</td><td>2 Hours</td></tr>
<tr><td>CPMK2</td><td>Seismic 1 : Seismic process data for stratigraphy 1</td><td>TCL - SCL mixed</td><td>2 Hours</td></tr>
<tr><td>CPMK2</td><td>Seismic 2 : Seismic process data for stratigraphy 2</td><td>TCL - SCL mixed</td><td>2 Hours</td></tr>
<tr><td>CPMK2</td><td>Seismic 3 : Study of Seismic Attributes</td><td>TCL - SCL mixed</td><td>2 Hours</td></tr>
<tr><td colspan="4">UTS/Project Task Results/Case Analysis</td></tr>
<tr><td rowspan="7"></td><td>CPMK3</td><td>Paper 1 presentation by group A</td><td>Presentations and Discussions</td><td>2 Hours</td></tr>
<tr><td>CPMK3</td><td>Paper 2 presentation by group B</td><td>Presentations and Discussions</td><td>2 Hours</td></tr>
<tr><td>CPMK3</td><td>Paper 3 presentation by group C</td><td>Presentations and Discussions</td><td>2 Hours</td></tr>
<tr><td>CPMK3</td><td>Paper 4 presentation by group D</td><td>Presentations and Discussions</td><td>2 Hours</td></tr>
<tr><td>CPMK3</td><td>Paper 5 presentation by group E</td><td>Presentations and Discussions</td><td>2 Hours</td></tr>
<tr><td>CPMK3</td><td>Paper 6 presentation by group F</td><td>Presentations and Discussions</td><td>2 Hours</td></tr>
<tr><td>CPMK3</td><td>Paper 7 presentation by group G</td><td>Presentations and Discussions</td><td>2 Hours</td></tr>
<tr><td colspan="4">UAS/ Project Task Results/ Case Analysis</td></tr>
<tr><td>Learning Methods</td><td colspan="4">TCL - SCL, presentation, discussion</td></tr>
<tr><td>Student Learning Experience</td><td colspan="4"></td></tr>
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Access to Learning Media an/ LMS and Offline &; Online Percentage	LCD, Whiteboard, paper, Simaster (e-learning) or Google classroom or ELOK. 100% offline

Assessment Methods and Alignment with CPMK

Assessment Techniques	Assessment Percentage	Criteria/ Indicators	CPMK 1	CPMK 2	CPMK3	
Participatory Activities *)	**20**	**Liveliness assessment rubric**		√	√	
***Project Results/*Hasil Case Study/ PBL Results**[*)]	**40**	**Rubric of assessment presentation of case study results**			√	
Cognitive						
UTS	**20**	**Answer key**	√			
UAS	**20**	**Answer key**			√	
Total	**100**					

*) can also be obtained from UTS or UAS which is the result of participatory activities or *project* / case study results. In accordance with IKU 7, **the percentage of** participatory activities and project results/case studies/PBL results is at least 50%.

Reference List

Veeken, PCH. 2007. Seismic Stratigraphy, Basin Analysis, and Reservoir Characterization. Handbook of Geophysical Exploration, Seismic Exploration, v37, Elservier, UK.

Name of Lecturer (*Team Teaching*)

1. Dr. Eddy Hartantyo
2. Dr. rer. Nat. Sintia Windhi Niasari

Authorization

Drafting Date	Course Coordinator	Coordinator of Expertise (if any)	Head of Study Program
August 3 2022	*(Signature)*		