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

Geophysics

Non-Seismic Method

Practicum MFG 3114/ 1 SKS

Mentoring Team:

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GADJAH MADA UNIVERSITY
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 3114	*Non-Seismic Method Practicum*	*T: -*	*P: 1*	*Odd*	*Mandatory*	*-*

Course Brief Description	After attending this course, students are expected to be able to carry out the process of data acquisition, data processing and interpretation of several non-seismic methods, including: geomagnetic, gravity, geoelectric, VLF, MT, and Self Potential.	
Graduate Learning Outcomes (CPL) Charged n in MK	***CPL-1***	**Good Attitude**: Graduates are honest, disciplined, curious, critical, confident, independent, emotionally mature, cooperative, and trustworthy. Uphold norms, values, morals, religion, general ethics and professional ethics, and actively play a role in the global movement of sustainable development and behave professionally
	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-5	**Synthesis and Evaluation Skills:** Graduates are able to interpret geophysical data in the form of solving advanced and reverse problems (inverse problems) in an integrated manner that have ambiguous characters, carry out interpretation by making models and / or solving simple forward and reverse problems and are skilled in the use of computers both for the purposes of solving geophysical problems and for communication and internet access.
	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	**After completing the learning of this course, students are expected to be able to:**	
	CPMK-1	work together in 1 team, and work between teams, be responsible, and disciplined

(CPMK)	***CPMK-2***	carry out acquisition, and simple processing of GEM, Gravity and Magnetic methods
	CPMK-3	Analyze processed field data and its relation to the surrounding geology
	CPMK-4	Students are able to convey the results of acquisition, data processing, analysis, and

CPL Mapping with CPMK

	CPMK-1	CPMK-2	CPMK-3	CPMK-4
CPL-1	5	5		10
CPL-3		15		
CPL-4	5	15	15	
CPL-5			15	
CPL-6	5			10

CPMK link with Material and Form of Learning, as well as Time Allocation

	Learning Materials	Forms of Learning	Time Allocation
CMPK-1	Basic knowledge of survey design in geophysics and GEM, Gravity, and Magnetic methods	TCL - SCL mixed	1 Hour
CMPK-1	Fundamentals of data acquisition of GEM, Gravity, and Magnetic methods, as well as introduction to field tools for data acquisition	TCL-SCL mixed	2 hours
CMPK-2	Fundamentals of Data Processing and Interpretation of GEM, Gravity, and Magnetic methods	TCL - SCL mixed	6 Hours
CMPK-2	Field Practice Acquisition of GEM, Gravity, and Magnetic methods	Field Practice	18 Hours
CMPK-3	Field Practice of Processing and Interpretation of GEM, Gravity, and Magnetic method data	Field Practice	9 Hours
CMPK-4	Presentation and Reporting of Survey Results	Classes and	6 Hours
	Response/Report		

Learning Methods	TCL - SCL Mixed Field Practice
Student Learning Experience	Conducting surveys / research, conducting data analysis and interpretation, writing scientific papers, drawing conclusions, presentations
Access to Learning Media / LMS and Offline &; Online Percentage	Slides, Practicum Handbook, Research Results

Assessment Methods and Alignment with CPMK

Assessment Techniques	Assessment Percentage	Criteria/ Indicators	CPMK-1	CPMK-2	CPMK-3	CPMK-4
Participatory Activities*)	**80**		**10**	**25**	**25**	**20**
***Project Results*/Case Study Results/PBL Results*)**						
Cognitive						

	Assignment	**10**	**Task results**		**5**	**5**	
	Quiz	**10**	**Quiz**		**5**	**5**	
	UTS						
	UAS						
	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	Non-Seismic Method Practicum Manual						
Name of Lecturer (*Team Teaching*)	Supervisor(s)						

Authorization	**Drafting Date**	**Course Coordinator**	**Coordinator of Expertise (if any)**	**Head of Study Program**
	2022	 *Drs. Imam Suyanto, M.Si.*		 Dr. Sudarmaji, MSi