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

Geophysics Geophysics Workshop
MFG 3121 / 2 credits

Mentoring

Supervisor(s)

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 3121	*Geophysics Workshop*	*T: 2*	*P: -*	*Complete*	*Mandatory*	*Minimum 100 credits*

Course Brief Description	After attending this course, students are able to apply and integrate all geophysical and geological methods in a geophysical exploration work. Survey planning, data retrieval, data processing and interpretation of all geophysical methods, making daily reports, presenting, and writing papers of each method, and integrated analysis of several geophysical methods.	
Graduate Learning Outcomes (CPL) Charged to 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-2	**Mastery of general knowledge:** Graduates are able to apply basic science (mathematics, physics, chemistry, biology, geology), and geophysics in general and their relationship with other sciences such as geology, geodesy, geochemistry, geography, computing and information technology.
	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)
Learning Outcomes	**After completing the learning of this course, students are expected to be able to:**	

Course (CPMK)	***CPMK-1***	work together in 1 team, and work between teams, be responsible, and disciplined
	CMPK-2	able to make Geophysical survey planning, especially making survey designs for various Geophysical methods
	CMPK-3	carry out data acquisition and processing of various Geophysical methods
	CMPK-4	Analyze processed field data and its relation to the surrounding geology
	CMPK-5	Students are able to convey the results of acquisition, data processing, analysis, and interpretation

CPL mapping with CPMK

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

CPMK link with Learning Materials and Forms, as well as Time Allocation

	Learning Materials	Forms of Learning	Time Allocation
CPMK 1	Refreshment of basic concepts of various Geophysical and Geological methods	TCL - SCL mixed	3 hours
CMPK 2	Basic knowledge of survey design on various Geophysical methods	TCL - SCL mixed	3 hours
CMPK 2	Fundamentals of data acquisition of various Geophysical methods and introduction of field tools for data acquisition	TCL - SCL mixed	6 hours
CMPK 3	Basics of Data Processing and Interpretation of various Geophysical methods	TCL – SCL mixed	10 hours
CMPK 3	Field Practice Data Acquisition of various Geophysical methods	Field Practice	36 hours
CMPK 4	Field Practice of Processing and Interpretation of Data of various Geophysical Methods	Field Practice	10 hours
CMPK 4	Conduct integrated analysis of various Geophysical methods with the concept of Geology	Field Practice	8 hours
CMPK 5	Presentation and Reporting of Survey Results	Classes and Practices	8 hours

Learning Methods	
Student Learning Experience	Conduct research, conduct analysis, write scientific papers, draw conclusions, presentations
Access Learning Media / LMS and Offline &; Online Percentage	Laptop/Computer, Paper

Assessment Methods and	**Assessment**	**Assessment Percentage**	**Criteria/ Indicators**	**CPMK-1**	**CPMK-2**	**CPMK-3**	**CPMK-4**	**CMPK-5**

Alignment with CPMK	**Participatory Activities*)**	**80**		**10**	**5**	**25**	**25**	**15**
	***Project Results*/Case Study Results/PBL Results*)**							
	Cognitive							
	Assignment	**10**		**5**	**5**			
	Quiz	**10**				**5**	**5**	
	UTS							
	UAS							
	Total	**100**		**15**	**10**	**30**	**30**	**15**
	*) 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	Field Geophysics Workshop Handbook							
Name of Lecturer Pengampu (*Team*	Supervisor(s)							

Authorization	**Drafting Date**	**Course Coordinator**	**Coordinator of Expertise (if any)**	**Head of Study Program**
	2020	 Drs. Imam Suyanto, M.Si		 Dr. Sudarmaji, MSi