

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



Geophysics
Geophysical Instrumentation Practicum
MFG 4720/1 credits

Mentoring

**UNIVERSITAS GADJAH
MADA FACULTY OF
MATHEMATICS AND
NATURAL SCIENCES
2020**



Gadjah Mada University
 Faculty of Mathematics and Natural Sciences
 Department of Physics / S1 Geophysics Study Program
 Even Semester 2020

Document Code:

.....

SEMESTER LEARNING PROGRAM AND ACTIVITY PLAN (RPKPS)

| Course Code | Course Name | Weight (credit) | | Semester | Course Status | Prerequisite Courses | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---|-----------|-------------|--------------------------|------------------------|--|-------|-------|-------|-------|---|--|---|-------|--|--|--|-------|---|---|---|-------|--|--|--|-------|--|--|--|
| | | <i>T:</i> | <i>P:</i> | <i>even</i> | <i>Choice</i> | | | | | | | | | | | | | | | | | | | | | | | | | |
| Course Brief Description | After participating in this practicum, students are expected to be able to design, implement and test a measurement instrument / data logger related to geophysical methods. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Graduate Learning Outcomes (CPL) Charged n in MK | <i>CPL-1</i> | 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 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | <i>CPL-3</i> | 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. | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Course Learning Outcomes (CPMK) | After completing the learning of this course, students are expected to be able to: | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | <i>CPMK-1</i> | Students are able to design an instrument/data logger according to the topic [CPL-1, CPL-3] | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | <i>CPMK-2</i> | Students are able to make instruments/data loggers according to the topic [CPL-3] | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | <i>CPMK-3</i> | Students are able to test the instrument and analyze the results [CPL-1, CPL-3] | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CPL Mapping with CPMK | <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th></th> <th>CPMK1</th> <th>CPMK2</th> <th>CPMK3</th> </tr> </thead> <tbody> <tr> <td>CPL-1</td> <td>v</td> <td></td> <td>V</td> </tr> <tr> <td>CPL-2</td> <td></td> <td></td> <td></td> </tr> <tr> <td>CPL-3</td> <td>v</td> <td>v</td> <td>V</td> </tr> <tr> <td>CPL-4</td> <td></td> <td></td> <td></td> </tr> <tr> <td>CPL-5</td> <td></td> <td></td> <td></td> </tr> </tbody> </table> | | | | | | | CPMK1 | CPMK2 | CPMK3 | CPL-1 | v | | V | CPL-2 | | | | CPL-3 | v | v | V | CPL-4 | | | | CPL-5 | | | |
| | CPMK1 | CPMK2 | CPMK3 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CPL-1 | v | | V | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CPL-2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CPL-3 | v | v | V | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CPL-4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CPL-5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CPM K link with Material and Form of Learning, as well as Time Allocation | Learning Materials | | | | Forms of Learning | Time Allocation | | | | | | | | | | | | | | | | | | | | | | | | |
| | Introduction and discussion of individual tasks | | | | TCL - SCL mixed | 2 Hours | | | | | | | | | | | | | | | | | | | | | | | | |
| | Instrument design discussion | | | | Case Based | 4 Hours | | | | | | | | | | | | | | | | | | | | | | | | |
| | Discussion and monitoring of instrument making | | | | Case Based | 16 Hours | | | | | | | | | | | | | | | | | | | | | | | | |
| | Discussion and monitoring of instrument trials | | | | Case Based | 4 Hours | | | | | | | | | | | | | | | | | | | | | | | | |
| | Report generation | | | | Case Based | 2 Hours | | | | | | | | | | | | | | | | | | | | | | | | |

| | | | | | | | | | |
|--|---|------------------------------|-----------------------------|---------------|---|---------------|------------------------------|--|--|
| Learning Methods | CBL | | | | | | | | |
| Student Learning Experience | Study, discussion, practice, problem solving, question and answer | | | | | | | | |
| Access to Learning Media and/ LMS and Offline & Online Percentage | Slides, reference books, Gclass | | | | | | | | |
| Assessment Methods and Alignment with CPMK | Assessment Techniques | Assessment Percentage | Criteria / Indicator | CPMK-1 | CPMK-2 | CPMK-3 | | | |
| | Participatory Activities^{*)} | 10 | | 5 | | 5 | | | |
| | Project Results / Case Study / PBL Results^{*)} | 90 | | 5 | 70 | 15 | | | |
| | Cognitive | | | | | | | | |
| | Assignment | 100 | | 10 | 70 | 20 | | | |
| | Quiz | | | | | | | | |
| | UTS | | | | | | | | |
| | UAS | | | | | | | | |
| | Total | 100 | | | | | | | |
| | *) can also be obtained from UTS or UAS which is the result of participatory activities or <i>project</i> / 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 | Instruction books of each Geophysical tool | | | | | | | | |
| Name of Lecturer (Team Teaching) | Dr. Eddy Hartantyo Dr. Afif Rakhman | | | | | | | | |
| Authorization | Drafting Date | Course Coordinator | | | Coordinator of Expertise (if applicable) | | Head of Study Program | | |

| | | | |
|--|------|--------------------|--|
| | 2020 | Dr. Eddy Hartantyo |  Dr.. Sudarmaji,MSi |
|--|------|--------------------|--|