

## COURSE PORTFOLIO

|                      |                                                                                                                      |
|----------------------|----------------------------------------------------------------------------------------------------------------------|
| Study Program        | : GEOPHYSICS - S1                                                                                                    |
| Semester             | : EVEN 2024/2025                                                                                                     |
| Course Code          | : 23H06110302                                                                                                        |
| Course Name          | : Geomechanics                                                                                                       |
| Coordinator          | : Ir. Bambang Hari Mei Soeprapto, M.Si.                                                                              |
| Lecturer Team Member | : Ir. Bambang Hari Mei Soeprapto, M.Si., Dr. Muhammad Hamzah S.,<br>S.Si.,MT., Prof. Dr. Eng. Amiruddin, S.Si, M.Si. |

### Implementation of Learning

Description of the implementation of the lecture, the suitability of what was planned in the RPS with what was done:

#### Number and percentage of lecturer and student attendance

(data source: monitoring the attendance of lecturers and students)

| Lecturer Attendance |                                          |              | Student Attendance                             |
|---------------------|------------------------------------------|--------------|------------------------------------------------|
| Geomechanics<br>(A) | Ir. Bambang Hari Mei Soeprapto,<br>M.Si. | : 8<br>times | Number of students: 41 persons                 |
|                     | Prof. Dr. Eng. Amiruddin, S.Si, M.Si.    | : 8<br>times | Presence $\geq$ 80% : 41 persons (100.00<br>%) |
|                     |                                          |              | Presence < 80% : 0 person (0.00 %)             |
|                     | Total Meeting : 16 times.                |              |                                                |
| Geomechanics<br>(B) | Ir. Bambang Hari Mei Soeprapto,<br>M.Si. | : 6<br>times | Number of students: 43 persons                 |
|                     | Prof. Dr. Eng. Amiruddin, S.Si, M.Si.    | : 5<br>times | Presence $\geq$ 80% : 43 persons (100.00<br>%) |
|                     | Dr. Muhammad Hamzah S.,<br>S.Si.,MT.     | : 5<br>times | Presence < 80% : 0 person (0.00 %)             |
|                     | Total Meeting : 16 times.                |              |                                                |

### Materials/practicum provided

#### Learning materials in the geomechanics course are:

1. The origin of the formation of the earth, the age of the earth, the formation of the solar system, the earth-moon system, the time of core formation.
2. Travel time and velocity-depth curve, Free oscillations of the earth, density variations and physical properties of the earth, Mantle core boundaries.
3. Formation of the earth's core, experimental methods, abundance of elements, formation of the outer core.
4. Composition of the earth's crust, Chemical elements of the lithosphere
5. Subsurface waves, Tomography
6. Melting point at depth, adiabatic temperature, Thermal regime of the earth's core, Geothermal history.

7. Fourier's Law, Measurement of heat flow, Earth's surface heat flow, Convection currents.
8. Heat in radioactive decay, Heat in continents
9. Compensation model, Geoid Anomaly
10. Topographic forming style, Geoid
11. Elasticity and plasticity, Mantle rheology, Mantle convection, Earth cooling
12. Crustal rheology, viscoelasticity, elastic and plastic properties of the earth's crust
13. Geochronology and radioactivity, Reservoir geochemistry, Noble gas systems

#### **The learning methods implemented**

**The learning methods used for the geomechanics course are:** 1. Group discussion (Small Group Discussion)

2. Cooperative learning (Cooperative learning)
3. Case Study
4. Paper creation and PPT creation
5. Self-Directed Learning
6. Lecture reconstruction

#### **The assessment method implemented**

1. Project/Case Study
2. Final exams
3. Midterm exam

#### **Supplementary information (if available)**

None

## **2. Learning Outcomes**

### **Measurement results of CLO**

Assessment and Evaluation of Student Achievement of CLO<sup>a</sup>

| <b>LOs that are charged to the Course</b> | <b>CLO</b> | <b>Assessment Form</b> | <b>Weight</b> | <b>Average student score (0-100)</b> |
|-------------------------------------------|------------|------------------------|---------------|--------------------------------------|
| P1                                        | CLO-1      | Midterm exam           | 10.00 %       | 6.56                                 |
| P1                                        | CLO-1      | Project/Case Study     | 5.00 %        | 3.27                                 |
| KU1                                       | CLO-2      | Midterm exam           | 25.00 %       | 19.73                                |
| KU1                                       | CLO-2      | Project/Case Study     | 25.00 %       | 20.35                                |
| KU1                                       | CLO-3      | Final exams            | 50.00 %       | 37.50                                |
| KU1                                       | CLO-3      | Project/Case Study     | 5.00 %        | 2.93                                 |
| KU1                                       | CLO-3      | Project/Case Study     | 25.00 %       | 20.35                                |
| KU1                                       | CLO-3      | Project/Case Study     | 15.00 %       | 14.82                                |
| KK1                                       | CLO-2      | Project/Case Study     | 25.00 %       | 20.35                                |
| KK1                                       | CLO-2      | Midterm exam           | 25.00 %       | 19.73                                |

| LOs that are charged to the Course | CLO   | Assessment Form    | Weight  | Average student score (0-100) |
|------------------------------------|-------|--------------------|---------|-------------------------------|
| KK1                                | CLO-3 | Project/Case Study | 15.00 % | 14.82                         |
| KK1                                | CLO-3 | Project/Case Study | 25.00 % | 20.35                         |
| KK1                                | CLO-3 | Final exams        | 50.00 % | 37.50                         |
| KK1                                | CLO-3 | Project/Case Study | 5.00 %  | 2.93                          |
| KK3                                | CLO-2 | Project/Case Study | 25.00 % | 20.35                         |
| KK3                                | CLO-2 | Midterm exam       | 25.00 % | 19.73                         |
| KK3                                | CLO-3 | Project/Case Study | 15.00 % | 14.82                         |
| KK3                                | CLO-3 | Project/Case Study | 25.00 % | 20.35                         |
| KK3                                | CLO-3 | Final exams        | 50.00 % | 37.50                         |
| KK3                                | CLO-3 | Project/Case Study | 5.00 %  | 2.93                          |

a: result criteria: very satisfactory if the average score is  $\geq 80$ ; satisfactory if the average score is 70 - 79.9; unsatisfactory if the average score is  $< 70$ .

### Percentage of students who achieved a very satisfactory CLO score<sup>b</sup>

(data source: student scores per assessment according to CLOs)

| CLO   | % of students who achieved a CLO score of at least 80 |
|-------|-------------------------------------------------------|
| CLO-1 | 1.19%                                                 |
| CLO-2 | 98.81%                                                |
| CLO-3 | 63.10%                                                |

b: result criteria: very satisfactory if  $\geq 80\%$  of students score  $\geq 80$ ; satisfactory if 70%-79.9% of students score  $\geq 80$ ; less satisfactory if  $< 70\%$  of students score  $\geq 80$ .

### Course Grade

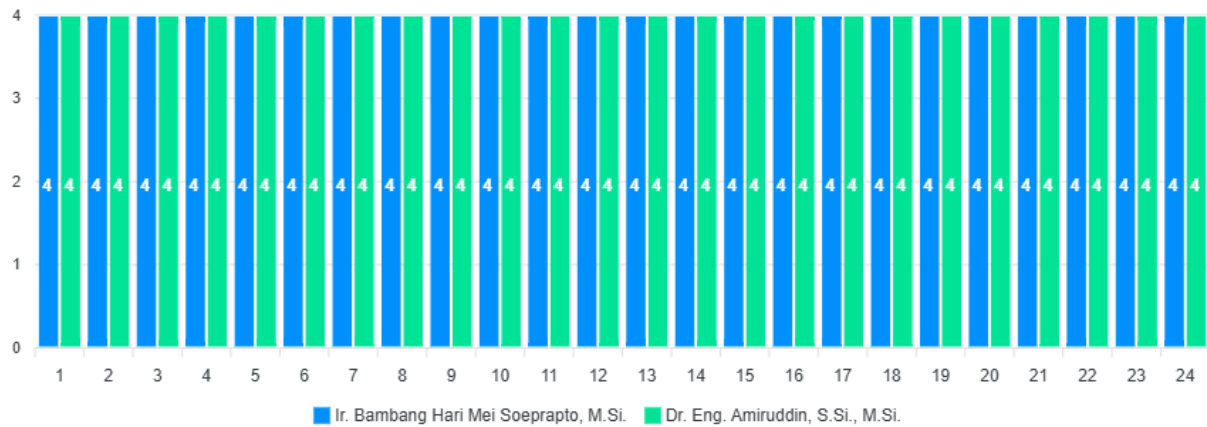
| Course Grade | Number and Percentage of Students |
|--------------|-----------------------------------|
| A            | 21 (25.0%)                        |
| A-           | 26 (31.0%)                        |
| B+           | 15 (17.9%)                        |
| B            | 21 (25.0%)                        |
| B-           | 0 (0.0%)                          |
| C+           | 0 (0.0%)                          |
| C            | 0 (0.0%)                          |
| D            | 0 (0.0%)                          |
| E            | 1 (1.2%)                          |

### 3. Learning evaluation (survey) results

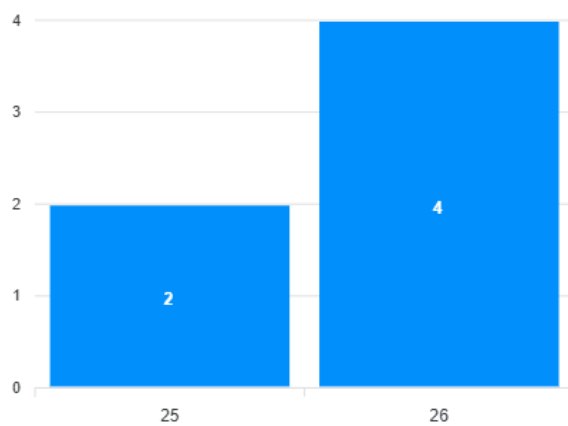
(data source: items / narratives of the results of the MK evaluation questionnaire by students)

Hasil evaluasi mata kuliah Geomekanika

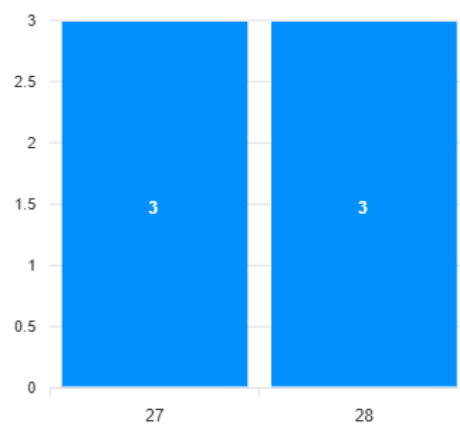
**Grafik Kuisisioner Pembelajaran Matakuliah Geomekanika**



**Grafik Kuisisioner Pembelajaran**



**Grafik Kuisisioner Pembelajaran**



Keterangan Nilai  
Pertanyaan 1 - 24:

- 4 : Sangat Setuju/ Sangat Baik
- 3 : Setuju / Baik
- 2 : Ragu-ragu / Cukup
- 1 : Tidak Setuju / Kurang

Pertanyaan 25 dan 26: (WE = Waktu Efektif)

- 5 : WE > 200 menit
- 4 : 180 menit < WE <=200 menit
- 3 : 120 menit < WE <=180 menit
- 2 : 60 menit < WE <=120 menit
- 1 : 1:WE <= 60 menit

Pertanyaan 27:

- 3 : Lebih Banyak
- 2 : Sama
- 1 : Lebih Sedikit

Pertanyaan 28:

- 3 : Sama
- 2 : Cukup Sesuai
- 1 : Kurang Sesuai

#### Informasi Pertanyaan Kuisisioner

1. Dosen Menyampaikan Rancangan Pembelajaran Semester (RPS) dan Kontrak Perkuliahan di awal Perkuliahan dengan Jelas
2. Dosen Menjalankan Proses Pembelajaran yang berpusat pada mahasiswa (Student Centered Learning)
3. Dosen Menyiapkan materi Pembelajaran dan sumber daya pendukung pembelajaran (diktat, slide, kasus, tugas, bahan ujian, dsb )
4. Dosen menjelaskan materi dengan baik dan jelas
5. Dosen memberikan materi setiap minggu sesuai dengan Rancangan Pembelajaran Semester (RPS) matakuliah
6. Dosen mempunyai kepedulian dan membantu mahasiswa dalam pemahaman dan penguasaan suatu materi
7. Dosen Memberikan Penilaian dengan jelas dan sesuai dengan kontrak perkuliahan yang telah disepakati
8. Dosen memberikan umpan balik dengan memberikan komentar secara lengkap
9. Saya memahami materi kuliah setelah menyelesaikan perkuliahan ini
10. Matakuliah yang diberikan menstimulasi kemampuan intelektual saya
11. Tingkat kehadiran saya dalam matakuliah ini sangat tinggi (lebih dari 80% pertemuan )
12. Dosen menggunakan lebih dari satu metode penilaian (Assessment Method)
13. Jadwal matakuliah telah diinformasikan di SIM secara jelas sebelum perkuliahan dimulai
14. Dosen memberikan kuliah sesuai dengan jadwal kuliah yang telah ditetapkan
15. Dosen hadir tepat waktu sesuai dengan jadwal kuliah yang telah ditetapkan
16. Dosen menyelesaikan perkuliahan tepat waktu sesuai dengan jadwal kuliah yang telah ditetapkan
17. Tersedia buku acuan/modul/ringkasan materi/slide matakuliah untuk semua materi yang diberikan
18. Buku acuan/modul/ringkasan materi/slide matakuliah yang diberikan bermanfaat dan uptodate dengan perkembangan yang ada
19. Selama Kuliah daring, fasilitas perkuliahan cukup memadai
20. Saya dapat mengakses fasilitas internet ketika saya membutuhkan
21. Layanan Perpustakaan Prodi/Departemen/Fakultas/Universitas sangat membantu dalam proses pembelajaran
22. Beban sks matakuliah ini sudah sesuai dengan kompetensi yang akan dicapai (Catatan : 1 sks setara dengan 170 menit kegiatan belajar setiap pekan per semester)
23. Saya menggunakan SIKOLA sebagai wadah pembelajaran
24. Layanan Perpustakaan Prodi/Departemen, Universitas sangat membantu dalam proses pembelajaran
25. Rata-rata Waktu Efektif (dalam menit) yang anda habiskan dalam seminggu (di luar jam perkuliahan) untuk menyelesaikan tugas terstruktur pada matakuliah ini
26. Rata-rata Waktu Efektif (dalam menit) yang anda habiskan dalam seminggu (di luar jam perkuliahan) untuk belajar mandiri pada matakuliah ini
27. Dibandingkan dengan matakuliah yang lainnya, jumlah waktu yang anda habiskan khusus untuk matakuliah ini
28. Alokasi waktu yang digunakan untuk menyelesaikan tugas yang diberikan matakuliah ini

#### 4. Analysis and Reflection

Gagal diterjemahkan

#### 5. Follow-up Plan

To strengthen the implementation of the Geomechanics course in the next semester, the follow-up plans are: Deepening the topics of the origin of the earth, rheology of the crust and mantle, geothermal conduction-convection, elastic-plastic, and tomography. Collaboration is strengthened through clear roles in acquisition, processing, and authoring; equipped with a structured rubric for technical reports to ensure consistency. Assessments are enriched with case study projects, conceptual quizzes, open exams, and CPMK question banks to monitor achievements. Assistance for at-risk students is carried out through early attendance alerts, material clinics, and additional guidance.

#### **6. Follow-up results on the previous semester's evaluation**

None

Makassar, 24 Oktober 2025

Ir. Bambang Hari Mei Soeprapto, M.Si.  
NIP 196105011990031003