

COURSE PORTFOLIO

Study Program	: MATHEMATICS - S1
Semester	: ODD 2024/2025
Course Code	: 23H01130103
Course Name	: Geometry
Coordinator	: Dr. Muh. Nur, S.Si., M.Si.
Lecturer Team Member	: Dr. Muh. Nur, S.Si., M.Si., Prof. Dr. Eng. Mawardi, 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
Geometry A	Prof. Dr. Eng. Mawardi, S.Si., M.Si.	: 8 times
	Dr. Muh. Nur, S.Si., M.Si.	: 8 times
	Total Meeting : 16 times.	
	Number of students: 28 persons Presence \geq 80% : 27 persons (96.43 %) Presence < 80% : 1 person (3.57 %)	
Geometry B	Prof. Dr. Eng. Mawardi, S.Si., M.Si.	: 8 times
	Dr. Muh. Nur, S.Si., M.Si.	: 8 times
	Total Meeting : 16 times.	
	Number of students: 40 persons Presence \geq 80% : 39 persons (97.50 %) Presence < 80% : 1 person (2.50 %)	

Materials/practicum provided

1. Properties of real numbers (review on real numbers)
2. Vector Space and Inner Product Space
3. Outer Multiplication, Bivectors and Trivectors
4. Multivectors and Geometric Multiplication
5. Projection, Reflection, Reflection
6. Applications of Geometric Algebra to the Euclidean Plane
7. Introduction to Quaternion Algebra
8. Quaternion Algebra
9. Rotations and Beyond Quaternions

The learning methods implemented

Meeting 1-2

Lecture: Group discussion (Small Group Discussion)

Time: 150 Minutes

3-4 Meetings

Seminar: Case Study (Case Study)

Time: 150 Minutes

5-7 Meetings

Seminar: Case Study (Case Study)

Time: 150 Minutes

8 Meetings

Other Formats: Self-Directed Learning

Time: 150 Minutes

9-10 Meetings

Lecture: Group discussion (Small Group Discussion), Study Case (Case Study)

Time: 150 Minutes

Meetings 11-13

Lecture: Group discussion (Small Group Discussion)

Time: 150 Minutes

Meeting 14-15

Seminar: Case Study (Case Study)

Time: 150 Minutes

16 Meetings

Other Formats: Self-Directed Learning

Time: 150 Minutes

The assessment method implemented

1. Case Studies
2. Mid Test
3. Final Test

Supplementary information (if available)

None

2. Learning Outcomes

Measurement results of CLO

Assessment and Evaluation of Student Achievement of CLO^a

LOs that are charged to the Course	CLO	Assessment Form	Weight	Average student score (0-100)
P2	CLO-1	Case Studies	10.00 %	8.57
P2	CLO-1	Mid Test	20.00 %	11.00
P2	CLO-1	Case Studies	10.00 %	9.25
P2	CLO-1	Mid Test	20.00 %	10.17
P2	CLO-1	Final Test	20.00 %	10.45
KU1	CLO-2	Case Studies	10.00 %	7.38
KU1	CLO-2	Mid Test	20.00 %	11.00
KU1	CLO-2	Case Studies	10.00 %	8.04
KU1	CLO-2	Mid Test	20.00 %	10.17
KU2	CLO-3	Case Studies	10.00 %	5.38
KU2	CLO-3	Final Test	20.00 %	11.75
KU2	CLO-3	Case Studies	10.00 %	5.04
KU2	CLO-3	Final Test	20.00 %	10.45

a: result criteria: very satisfactory if the average score is ≥ 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^b

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

CLO	% of students who achieved a CLO score of at least 80
CLO-1	4.41%
CLO-2	2.94%
CLO-3	11.76%

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

Course Grade

Course Grade	Number and Percentage of Students
A	6 (8.8%)
A-	2 (2.9%)
B+	12 (17.6%)
B	8 (11.8%)
B-	8 (11.8%)
C+	10 (14.7%)
C	14 (20.6%)
D	4 (5.9%)
E	4 (5.9%)

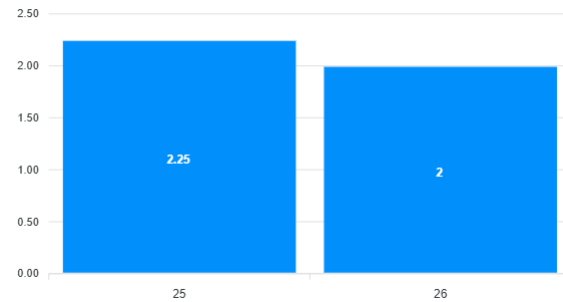
3. Learning evaluation (survey) results

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

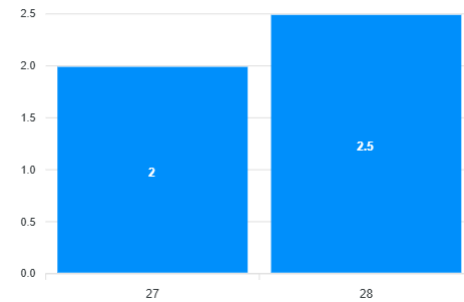
Grafik Kuisioner Pembelajaran Matakuliah Geometri



Grafik Kuisioner Pembelajaran



Grafik Kuisioner 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: 1WE <= 60 menit

Pertanyaan 27:

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

Pertanyaan 28:

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

Informasi Pertanyaan Kuisioner

1. Dosen Menyampaikan Rancangan Pembelajaran Semester (RPS) dan Kontrak Perkuliahan di awal Perkuliahan dengan Jelas

4. Dosen menjelaskan materi dengan baik dan jelas

7. Dosen Memberikan Penilaian dengan jelas dan sesuai dengan kontrak perkuliahan yang telah disepakati

10. Matakuliah yang diberikan menstimulasi kemampuan intelektual saya

13. Jadwal matakuliah telah diinformasikan di SIM secara jelas sebelum perkuliahan dimulai

16. Dosen menyelesaikan perkuliahan tepat waktu sesuai dengan jadwal kuliah yang telah ditetapkan

19. Selama Kualiah daring, fasilitas perkuliahan cukup memadai

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)

25. Rata-rata Waktu Efektif (dalam menit) yang anda habiskan dalam seminggu (di luar jam perkuliahan) untuk menyelesaikan tugas terstruktur pada matakuliah ini

28. Alokasi waktu yang digunakan untuk menyelesaikan tugas yang diberikan matakuliah ini

2. Dosen Menjalankan Proses Pembelajaran yang berpusat pada mahasiswa (Student Centered Learning)

5. Dosen memberikan materi setiap minggu sesuai dengan Rancangan Pembelajaran Semester (RPS) matakuliah

8. Dosen memberikan umpan balik dengan memberikan komentar secara lengkap

11. Tingkat kehadiran saya dalam matakuliah ini sangat tinggi (lebih dari 80% pertemuan)

14. Dosen memberikan kuliah sesuai dengan jadwal kuliah yang telah ditetapkan

17. Tersedia buku acuan/modul/ ringkasan materi/ slide matakuliah untuk semua materi yang diberikan

20. Saya menggunakan SIKOLA sebagai wadah pembelajaran

23. Saya menggunakan SIKOLA sebagai wadah pembelajaran

26. Rata-rata Waktu Efektif (dalam menit) yang anda habiskan dalam seminggu (di luar jam perkuliahan) untuk belajar mandiri pada matakuliah ini

3. Dosen Menyiapkan materi Pembelajaran dan sumber daya pendukung pembelajaran (diktat, slide, kasus, tugas, bahan ujian, dsb)

6. Dosen mempunyai kepedulian dan membantu mahasiswa dalam pemahaman penguasaan suatu materi

9. Saya memahami materi kuliah setelah menyelesaikan perkuliahan ini

12. Dosen menggunakan lebih dari satu metode penilaian (Assessment Methods)

15. Dosen hadir tepat waktu sesuai dengan jadwal kuliah yang telah ditetapkan

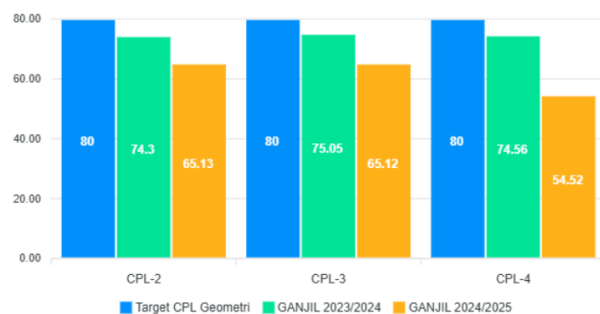
18. Buku acuan/modul/ ringkasan materi/ slide matakuliah yang diberikan benar dan up to date dengan perkembangan yang ada

21. Layanan Perpustakaan Prodi/ Departemen/ Fakultas/ Universitas sangat membantu dalam proses pembelajaran

24. Layanan Perpustakaan Prodi/ Departemen/ Universitas sangat membantu dalam proses pembelajaran

27. Dibandingkan dengan matakuliah yang lainnya, jumlah waktu yang anda habiskan khusus untuk matakuliah ini

Grafik CPL MK (Geometri)



Hasil Pengukuran CPL MK Geometri

4. Analysis and Reflection

Analysis and Reflection

Analysis

1. Significant and Comprehensive Decrease in Performance

Data analysis shows a significant and comprehensive decline in performance in the ODD semester 2024/2025. The performance of courses which in the previous period (ODD 2023/2024) was good with an average score of 74, has now fallen substantially, with all CPLs well below the target of 80.

2. Existence of Localized Critical Failure Areas

The decline that occurred was very uneven. The most critical and fundamental failure occurred in CPL-4, which experienced a performance collapse, falling 20 points from 74.56 to 54.52. Meanwhile, CPL-2 and CPL-3 also experienced a significant decline, but with a smaller difference, namely around 9-10 points.

Reflection

1. Indication of Dual Problems: Systemic and Specific

The decline that occurred in all areas reflects the possibility of a systemic problem that has a general impact, such as a change in the final evaluation method. However, the much more severe failures on the CPL-4 specifically reflect the presence of additional problems localized to the content, teaching methods, or evaluation instruments directly related to the CPL.

2. The Need for Emergency Investigation with Priority in the Weakest Areas

Achievement levels below 55 on CPL-4 are an emergency condition (red flag) which reflects the need for an immediate, highly focused investigation. Improvement efforts must prioritize a total audit of all aspects related to CPL-4 to find the root of the problem. Understanding the causes of failure at these weakest points can provide the key to correcting problems that occur throughout the course.

5. Follow-up Plan

In response to the significant decline in performance in the Geometry Course, especially the decline in achievement in CPL-4 which fell to a critical level of 54.52, the follow-up plan will be to revise the RPS. The top priority is to focus on content, teaching methods, and evaluation instruments specific to CPL-4 to identify the root causes of the failure. Simultaneously, a comparative analysis will be carried out on CPL-2 and CPL-3 to understand the factors causing the general decline in performance between 2023/2024 and 2024/2025. The aim of this strategy is to quickly address critical areas while correcting systemic problems, in order to restore overall learning outcomes so they can return closer to the expected targets.

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

Following up on the findings of the previous semester's evaluation for the Geometry Course, which showed a significant decline in performance, especially a decline in achievement in CPL-4 (falling to 54.52 from 74.56), a preventive action to change teaching methods and update evaluation instruments has been implemented. However, it needs to be improved continuously in the following semester.

Makassar, 24 Oktober 2025

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