COURSE PORTFOLIO

Study Program	:	MATHEMATICS - S1
Semester	:	ODD 2023/2024
Course Code	:	23H01120204
Course Name	:	Advanced Mathematics
Coordinator	:	Dr. Muhammad Zakir, M.Si.
Lecturer Team Member	:	Dr. Muhammad Zakir, M.Si., Dr. Andi Muhammad Anwar, 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
Advanced Mathematics A	Dr. Muhammad Zakir, M.Si.	:	8 times	Number of students: 26 persons
	Dr. Andi Muhammad Anwar, S.Si., M.Si	:	8 times	Presence ≥ 80% : 25 persons (96.15 %) Presence < 80% : 1 person (3.85 %)
	Total Meeting : 16 times.			
Advanced mathematics B	Dr. Muhammad Zakir, M.Si.	:	8 times	Number of students: 49 persons
	Dr. Andi Muhammad Anwar, S.Si., M.Si	:	8 times	Presence ≥ 80% : 46 persons (93.88 %) Presence < 80% : 3 persons (6.12 %)
	Total Meeting : 16 times.			

Materials/practicum provided

1. Vector Functions: Parametric Functions, Vector Functions and Space Curves, Derivatives and Integrals of Vector Functions, Arc Length and Curvature, Motion in Space

2. Calculus Vector: vectors fields, line integrals, The Fundamental Theorem for Line Integrals, Green's theorem, curl and divergence, Surface integrals, Stokes Theorem

3. Line Integrals and Surface Integrals

4. Sequence and Series

5. Series and Fourier Integrals

6. Gamma and Beta Functions

The learning methods implemented

College

The assessment method implemented

1. Quiz
2. Group task
3. Final Test
4. Mid Test
5. Independent Assignment

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)
ILO 1	CLO-1	Group task	15.00 %	72.37
ILO 1	CLO-1	Final Test	20.00 %	69.23
ILO 1	CLO-1	Mid Test	20.00 %	57.56
ILO 1	CLO-1	Independent Assignment	5.00 %	65.31
ILO 1	CLO-1	Quiz	5.00 %	60.29
P2	CLO-3	Group task	10.00 %	62.68
P2	CLO-3	Quiz	5.00 %	63.23
P2	CLO-3	Independent Assignment	5.00 %	65.31
P2	CLO-3	Independent Assignment	10.00 %	70.61
P2	CLO-3	Mid Test	20.00 %	57.56
P2	CLO-3	Final Test	20.00 %	69.23
KU1	CLO-3	Group task	10.00 %	62.68
KU1	CLO-3	Quiz	5.00 %	63.23
KU1	CLO-3	Independent Assignment	10.00 %	70.61
KU1	CLO-3	Independent Assignment	5.00 %	65.31
KU1	CLO-3	Mid Test	20.00 %	57.56

LOs that are charged to the Course	CLO	Assessment Form	Weight	Average student score (0-100)
KU1	CLO-3	Final Test	20.00 %	69.23

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	16.00%
CLO-2	0.00%
CLO-3	21.33%

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

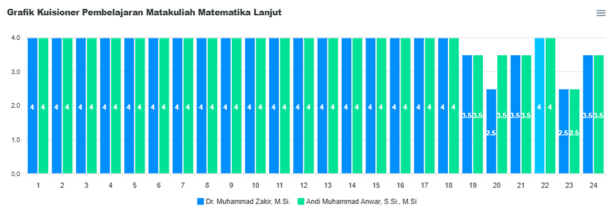
Course Grade

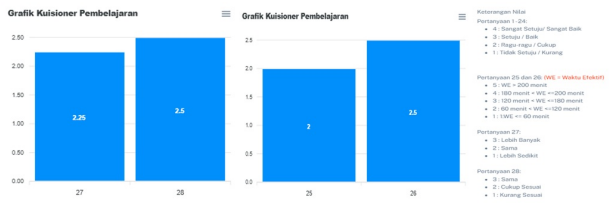
Course Grade	Number and Percentage of Students
A	5 (6.7%)
A-	10 (13.3%)
B+	7 (9.3%)
B	11 (14.7%)
B-	7 (9.3%)
C+	11 (14.7%)
C	21 (28.0%)
D	0 (0.0%)
E	3 (4.0%)

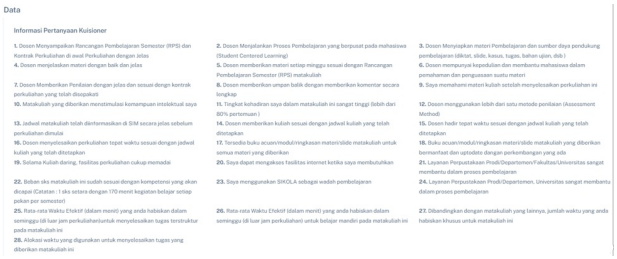
3. Learning evaluation (survey) results

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

Hasil Evaluasi Pembelajaran Matakuliah Matematika Lanjut



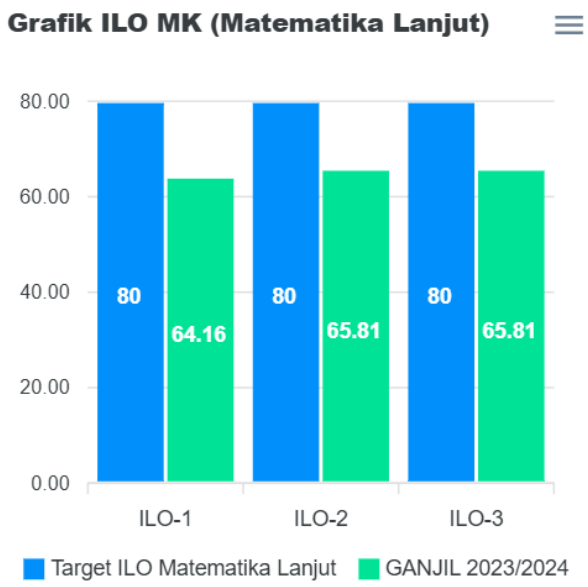




Data

Informasi Pertanyaan Kuisioner

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 Menyajikan 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 merstimulasi 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



Hasil Pengukuran CPL Mata Kuliah Matematika Lanjut

4. Analysis and Reflection

Analysis and Reflection

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Analysis

Analysis of the data shows that performance in the Advanced Mathematics Course is at a low level and consistently fails to achieve the expected targets. Learning achievements in all aspects measured are far below the established standards. In addition, this pattern of low performance is very uniform and evenly distributed across all learning outcomes, with no areas that stand out or are better than others, which indicates that the challenges faced are comprehensive in this course.

Reflection

This very uniform low performance reflects the possibility of a fundamental problem in the design or pedagogical approach of the course, rather than simply difficulty with particular topics. There is a potential for misalignment between the complexity of the material, the teaching methods used, and students' initial abilities. Therefore, the follow-up that is needed is not a partial improvement, but rather a comprehensive structural review of the entire syllabus, teaching methods and evaluation system to fundamentally improve achievements.

5. Follow-up Plan

In response to learning outcomes that are consistently far below targets in the Advanced Mathematics

Course, the follow-up plan will focus on comprehensive structural interventions. This step will include a fundamental review of curriculum and syllabus design, as well as the introduction of intensive tutorial or response sessions to strengthen students' understanding of abstract concepts. The aim is to systematically raise the foundation of students' understanding and skills so that achievements can be improved significantly in the next evaluation period.

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

Following up on the findings of the previous semester's evaluation for the Advanced Mathematics Course, strengthening aspects of conceptual understanding through the addition of mandatory tutorial sessions and overhauling the evaluation method has been implemented. This new framework needs to be established as a permanent standard to improve quality in the future.

Makassar, 21 Oktober 2025

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