COURSE PORTFOLIO

Study Program	:	MATHEMATICS - S1
Semester	:	ODD 2024/2025
Course Code	:	23H01120603
Course Name	:	Differential Equations
Coordinator	:	Prof. Dr. Jeffry Kusuma
Lecturer Team Member	:	Prof. Dr. Syamsuddin Toaha, M.Sc., Prof. Dr. Kasbawati, S.Si., M.Si., Prof. Dr. Jeffry Kusuma

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
Differential Equation A	Prof. Dr. Syamsuddin Toaha, M.Sc. Prof. Dr. Jeffry Kusuma Total Meeting : 16 times.	: 8 times : 8 times	Number of students: 42 persons Presence ≥ 80% : 42 persons (100.00 %) Presence < 80% : 0 person (0.00 %)
Differential Equation B	Prof. Dr. Jeffry Kusuma Prof. Dr. Kasbawati, S.Si., M.Si. Total Meeting : 16 times.	: 8 times : 8 times	Number of students: 33 persons Presence ≥ 80% : 31 persons (93.94 %) Presence < 80% : 2 persons (6.06 %)

Materials/practicum provided

1. Understanding & PD classification (Definition and classification of ODE)
2. First order Linear and Nonlinear PD (first order Linear and Nonlinear of ODE)
3. Second order PD and high order PD (second order and high order of ODE)
4. PD with sequence method (sequences method)
5. PD with method Operator (Operator method for solving differential equations)
6. PD with Laplace transformation (Laplace Transformation)
7. Convolution theorem for Laplace Transformation (Convolution theorem for Laplace Transformation)
8. Reducing high order PD into a PD (Reduction of high order) system differential equation into system of differential equations)
9. Matrix method for solving system of ODE (Matrice method for solving system of ODE)
10. Second order PD with variable coefficients (Second order with variable coefficient)
11. Introduction to numerical methods for solving PD first order (Introduction of numerical method for solving first order differential equations)

The learning methods implemented

Meeting 1-2

Offline

Lecture: Self-Directed Learning, Learning collaborative (Collaborative Learning) Time: 2x3x50

Online

Lecture: Self-Directed Learning

Time: 2x3x120

3 Meetings

Offline

Lecture: Self-Directed Learning, Learning collaborative (Collaborative Learning), Other methods

Time: 1x3x50

Online

Lecture: Self-Directed Learning

Time: 1x3x120

4-5 Meetings

Offline

Lecture: Self-Directed Learning

Time: 2x3x50

Online

Lecture: Self-Directed Learning

Time: 2x3x120

6-7 Meetings

Offline

Lecture: Self-Directed Learning

Time: 2x3x50

Online

Lecture: Self-Directed Learning

Time: 2x3x120

Meeting 8

Midterm Exam

Meeting 9-10

Offline

Response and Tutorial: Case Study

Time: 2x3x50

Online

Response and Tutorials: Case Study (Case Study)

Time: 2x3x120

Meeting 11

Offline

Response and Tutorial: Case Study

Time: 1x3x50

Online

Response and Tutorials: Case Study (Case Study)

Time: 1x3x120

12 Meetings

Offline

Response and Tutorial: Case Study

Time: 1x3x50

Online

Response and Tutorials: Case Study (Case Study)

Time: 1x3x120

13-14 Meeting

Offline

Response and Tutorial: Case Study

Time: 2x3x50

Online

Response and Tutorials: Case Study (Case Study)

Time: 2x3x120

15 Meetings

Offline

Response and Tutorial: Case Study

Time: 1x3x50

Online

Response and Tutorials: Case Study (Case Study)

Time: 1x3x120

The assessment method implemented

1. Quiz
2. Case Studies
3. Mid Test
4. 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	Mid Test	30.00 %	10.58
ILO 1	CLO-1	Independent Assignment	5.00 %	2.58
ILO 1	CLO-1	Independent Assignment	5.00 %	56.96
ILO 1	CLO-1	Mid Test	30.00 %	56.96
ILO 1	CLO-1	Quiz	5.00 %	3.27
ILO 1	CLO-1	Case Studies	20.00 %	56.96
ILO 1	CLO-1	Case Studies	7.50 %	56.96
ILO 1	CLO-2	Quiz	5.00 %	3.27
ILO 1	CLO-2	Mid Test	30.00 %	10.58
ILO 1	CLO-2	Case Studies	5.00 %	62.68
ILO 1	CLO-2	Mid Test	30.00 %	56.96
ILO 1	CLO-2	Case Studies	7.50 %	56.96
ILO 1	CLO-2	Independent Assignment	5.00 %	2.23
ILO 1	CLO-2	Independent Assignment	5.00 %	56.96
ILO 1	CLO-3	Independent Assignment	5.00 %	56.96
ILO 1	CLO-3	Case Studies	20.00 %	56.96
ILO 1	CLO-3	Mid Test	30.00 %	56.96
ILO 1	CLO-3	Mid Test	30.00 %	10.58
ILO 1	CLO-3	Case Studies	5.00 %	63.66
ILO 1	CLO-3	Case Studies	20.00 %	20.24
ILO 1	CLO-3	Independent Assignment	5.00 %	2.23
ILO 1	CLO-3	Case Studies	7.50 %	56.96
ILO 1	CLO-4	Case Studies	7.50 %	56.96
ILO 1	CLO-4	Mid Test	30.00 %	56.96
ILO 1	CLO-4	Case Studies	20.00 %	56.96
ILO 1	CLO-4	Independent Assignment	5.00 %	56.96
P2	CLO-1	Mid Test	30.00 %	10.58
P2	CLO-1	Case Studies	7.50 %	56.96
P2	CLO-1	Independent Assignment	5.00 %	2.58
P2	CLO-1	Mid Test	30.00 %	56.96
P2	CLO-1	Independent Assignment	5.00 %	56.96
P2	CLO-1	Quiz	5.00 %	3.27
P2	CLO-1	Case Studies	20.00 %	56.96
P2	CLO-2	Independent Assignment	5.00 %	56.96
P2	CLO-2	Case Studies	7.50 %	56.96
P2	CLO-2	Mid Test	30.00 %	10.58
P2	CLO-2	Quiz	5.00 %	3.27
P2	CLO-2	Case Studies	5.00 %	62.68
P2	CLO-2	Independent Assignment	5.00 %	2.23

LOs that are charged to the Course	CLO	Assessment Form	Weight	Average student score (0-100)
P2	CLO-2	Mid Test	30.00 %	56.96
P2	CLO-3	Mid Test	30.00 %	56.96
P2	CLO-3	Independent Assignment	5.00 %	56.96
P2	CLO-3	Case Studies	20.00 %	56.96
P2	CLO-3	Case Studies	7.50 %	56.96
P2	CLO-4	Case Studies	5.00 %	65.63
P2	CLO-4	Case Studies	20.00 %	20.24
P2	CLO-5	Independent Assignment	5.00 %	56.96
P2	CLO-5	Mid Test	30.00 %	56.96
P2	CLO-5	Case Studies	7.50 %	56.96
P2	CLO-5	Case Studies	20.00 %	56.96
KK1	CLO-2	Independent Assignment	5.00 %	2.23
KK1	CLO-2	Mid Test	30.00 %	10.58
KK1	CLO-2	Quiz	5.00 %	3.27
KK1	CLO-2	Case Studies	5.00 %	62.68
KK1	CLO-3	Independent Assignment	5.00 %	56.96
KK1	CLO-3	Mid Test	30.00 %	56.96
KK1	CLO-3	Case Studies	7.50 %	56.96
KK1	CLO-3	Case Studies	20.00 %	56.96
KK1	CLO-4	Case Studies	5.00 %	65.63
KK1	CLO-4	Case Studies	20.00 %	20.24
KK1	CLO-5	Case Studies	20.00 %	56.96
KK1	CLO-5	Independent Assignment	5.00 %	56.96
KK1	CLO-5	Case Studies	7.50 %	56.96
KK1	CLO-5	Mid Test	30.00 %	56.96
KK2	CLO-3	Mid Test	30.00 %	10.58
KK2	CLO-3	Independent Assignment	5.00 %	2.23
KK2	CLO-3	Case Studies	5.00 %	63.66
KK2	CLO-3	Case Studies	20.00 %	20.24
KK2	CLO-4	Case Studies	20.00 %	56.96
KK2	CLO-4	Mid Test	30.00 %	56.96
KK2	CLO-4	Case Studies	7.50 %	56.96
KK2	CLO-4	Independent Assignment	5.00 %	56.96

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	0.00%
CLO-2	4.00%
CLO-3	4.00%
CLO-4	6.67%

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

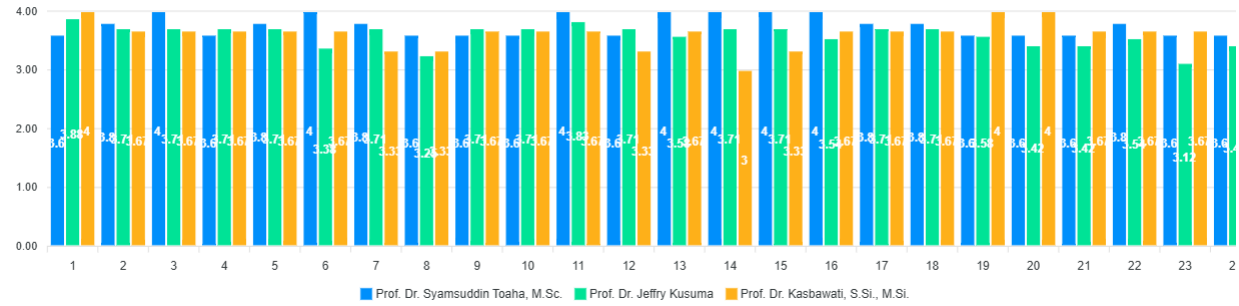
Course Grade	Number and Percentage of Students
A	4 (5.3%)
A-	1 (1.3%)
B+	6 (8.0%)
B	6 (8.0%)
B-	3 (4.0%)
C+	8 (10.7%)
C	30 (40.0%)

Course Grade	Number and Percentage of Students
D	4 (5.3%)
E	13 (17.3%)

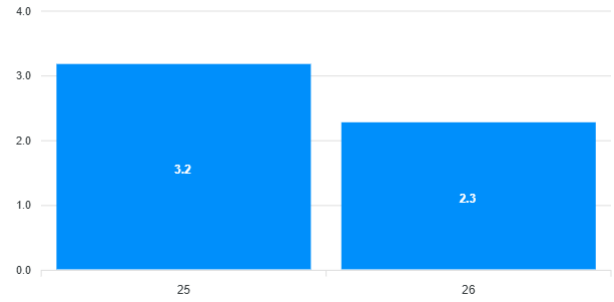
3. Learning evaluation (survey) results

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

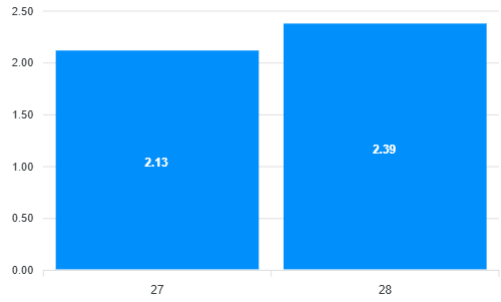
Grafik Kuisioner Pembelajaran Matakuliah Persamaan Diferensial



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:

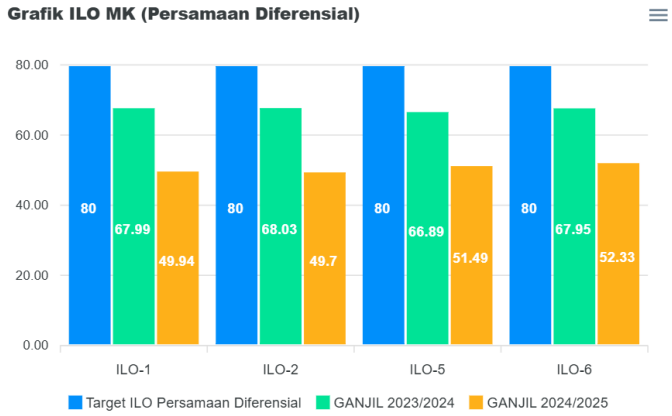
- 3 : Lebih Banyak
- 2 : Sama
- 1 : Lebih Sedikit

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
2. Dosen Menjalankan Proses Pembelajaran yang berpusat pada mahasiswa (Student Centered Learning)
3. Dosen Menyiapkan materi Pemebelajaran dan sumber daya pensukung pwmbelajaran (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 pemaham penguasaan suatu materi
7. Dosen Memberikan Penilaian dengan jelas dan sesuai dengn 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 Metho
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 ditetapk
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 berr dan uptodate dangan perkembangan yang ada
19. Selama Kualiah daring, fasilitas perkuliahan cukup memadai
20. Saya menggunakan SIKOLA sebagai wadah pembelajaran
21. Layanan Perpustakaan Prodi/Departemen/Fakultas/Universitas sangat me dalam proses pembelajaran
22. Beban sks matakuliah ini sudah sesuai dengan kompetensi yang akan dicapai (Catatan : 1 sks setara dngan 170 menit kegiatan belajar setiap pekan per semester)
23. Saya menggunakan SIKOLA sebagai wadah pembelajaran
24. Layanan Perpustakaan Prodi/Departemen,Universitas sangat membantu proses pembelajaran
25. Rata-rata Waktu Efektif (dalam menit) yang anda habiskan dalam seminggu (di luar jam perkuliahan)untuk menyelesaikan tugas terstrukturpada matakuliah ini
26. Rata-rata Waktu Efektif (dalam menit) yang anda habiskan dalam seminggu (di luar jam perkuliahan) unuk belajar mandiri pada matakuliah ini
27. Dibandingkan dengan matakuliah yang lainnya, jumlah waktu yang anda h khusus untuk matakuliah ini
28. Alokasi waktu yang digunakan untuk menyelesaikan tugas yang diberikan matakuliah ini



Hasil Pengukuran CPL MK Persamaan Diferensial

4. Analysis and Reflection

Analysis and Reflection

It can be seen that the CPL in differential equations in the odd semester 2023/2024 and the odd semester 2024/2025 did not reach the CPL target in differential equations.

This may be due to the low mastery of basic calculus material by students in admissions in the current year considering the lack of face-to-face learning experienced by students during the COVID-19 outbreak. This is estimated because teaching techniques, teaching teams, teaching facilities have not changed much compared to previous years.

5. Follow-up Plan

For the above students, their mastery of advanced courses such as partial differential equations will be monitored again.

For students taking it in the following year (odd semester 2025/2026), better mastery of calculus will be required.

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

Following up on findings in previous evaluations regarding low and continuing decline in performance in the Differential Equations Course, a comprehensive structural intervention has been implemented in the Odd semester 2024/2025. A new approach is recommended so that this new structure with intensive tutorials is maintained and continuously optimized in the future.

Makassar, 23 Oktober 2025

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