COURSE PORTFOLIO

Study Program	:	MATHEMATICS - S1
Semester	:	ODD 2023/2024
Course Code	:	23H01120603
Course Name	:	Differential Equations
Coordinator	:	Prof. Dr. Jeffry Kusuma
Lecturer Team Member	:	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. Jeffry Kusuma	:	times	Number of students: 38 persons
	Total Meeting : times.			Presence ≥ 80% : Presence < 80% :
Differential Equation B	Prof. Dr. Jeffry Kusuma	:	8 times	Number of students: 42 persons
	Prof. Dr. Kasbawati, S.Si., M.Si.	:	8 times	Presence ≥ 80% : 39 persons (92.86 %) Presence < 80% : 3 persons (7.14 %)
	Total Meeting : 16 times.			

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 using the sequence method

5. PD with the Operator method (Operator method for solving differential equations)

6. PD with Laplace transformation (Laplace Transformation)

7. Convolution theorem for Laplace Transformation

8. Reducing high order PD into a PD system (Reduction of high order differential equation into system of differential equation)

9. Matrix Method for Linear PD Systems (Matrice method for solving systems of ODE)

10. Second order PD with variable coefficient (Second order with variable coefficient)

11. Introduction to numerical methods for solving first order differential equations

The learning methods implemented

Collaborative Learning, Self-Directed Learning, Case Study

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	Independent Assignment	5.00 %	59.38
ILO 1	CLO-1	Case Studies	10.00 %	66.53
ILO 1	CLO-1	Mid Test	10.00 %	61.97
ILO 1	CLO-1	Case Studies	5.00 %	53.94
ILO 1	CLO-1	Mid Test	5.00 %	60.01
ILO 1	CLO-1	Mid Test	20.00 %	74.62
ILO 1	CLO-1	Quiz	5.00 %	56.20
ILO 1	CLO-2	Mid Test	20.00 %	74.62
ILO 1	CLO-2	Quiz	5.00 %	56.20
ILO 1	CLO-2	Case Studies	10.00 %	65.30
ILO 1	CLO-2	Mid Test	10.00 %	61.97
ILO 1	CLO-2	Independent Assignment	5.00 %	59.38
ILO 1	CLO-2	Mid Test	5.00 %	60.01
ILO 1	CLO-2	Case Studies	5.00 %	53.94
ILO 1	CLO-3	Mid Test	10.00 %	61.97
ILO 1	CLO-3	Case Studies	10.00 %	66.53

LOs that are charged to the Course	CLO	Assessment Form	Weight	Average student score (0-100)
ILO 1	CLO-3	Mid Test	20.00 %	74.62
ILO 1	CLO-3	Independent Assignment	5.00 %	58.33
ILO 1	CLO-3	Case Studies	5.00 %	53.94
ILO 1	CLO-4	Mid Test	5.00 %	60.01
ILO 1	CLO-4	Case Studies	10.00 %	68.36
ILO 1	CLO-4	Case Studies	5.00 %	53.94
ILO 1	CLO-4	Independent Assignment	5.00 %	60.65
ILO 1	CLO-4	Mid Test	20.00 %	74.62
P2	CLO-1	Case Studies	10.00 %	66.53
P2	CLO-1	Independent Assignment	5.00 %	59.38
P2	CLO-1	Case Studies	5.00 %	53.94
P2	CLO-1	Mid Test	20.00 %	74.62
P2	CLO-1	Mid Test	10.00 %	61.97
P2	CLO-1	Quiz	5.00 %	56.20
P2	CLO-1	Mid Test	5.00 %	60.01
P2	CLO-2	Mid Test	10.00 %	61.97
P2	CLO-2	Case Studies	10.00 %	65.30
P2	CLO-2	Independent Assignment	5.00 %	59.38
P2	CLO-2	Mid Test	20.00 %	74.62
P2	CLO-2	Quiz	5.00 %	56.20
P2	CLO-2	Case Studies	5.00 %	53.94
P2	CLO-2	Mid Test	5.00 %	60.01
P2	CLO-3	Mid Test	10.00 %	61.97
P2	CLO-3	Mid Test	20.00 %	74.62
P2	CLO-3	Case Studies	5.00 %	53.94
P2	CLO-3	Independent Assignment	5.00 %	58.33
P2	CLO-3	Case Studies	10.00 %	66.53
P2	CLO-5	Quiz	5.00 %	56.20
P2	CLO-5	Mid Test	20.00 %	74.62

LOs that are charged to the Course	CLO	Assessment Form	Weight	Average student score (0-100)
P2	CLO-5	Case Studies	5.00 %	53.94
P2	CLO-5	Case Studies	10.00 %	68.36
KK1	CLO-3	Case Studies	5.00 %	53.94
KK1	CLO-3	Independent Assignment	5.00 %	58.33
KK1	CLO-3	Case Studies	10.00 %	66.53
KK1	CLO-3	Mid Test	10.00 %	61.97
KK1	CLO-3	Mid Test	20.00 %	74.62
KK1	CLO-5	Case Studies	5.00 %	53.94
KK1	CLO-5	Quiz	5.00 %	56.20
KK1	CLO-5	Mid Test	20.00 %	74.62
KK1	CLO-5	Case Studies	10.00 %	68.36
KK2	CLO-4	Independent Assignment	5.00 %	60.65
KK2	CLO-4	Case Studies	5.00 %	53.94
KK2	CLO-4	Mid Test	5.00 %	60.01
KK2	CLO-4	Case Studies	10.00 %	68.36
KK2	CLO-4	Mid Test	20.00 %	74.62

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	23.75%
CLO-2	25.00%
CLO-3	15.00%
CLO-4	18.75%
CLO-5	18.75%

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

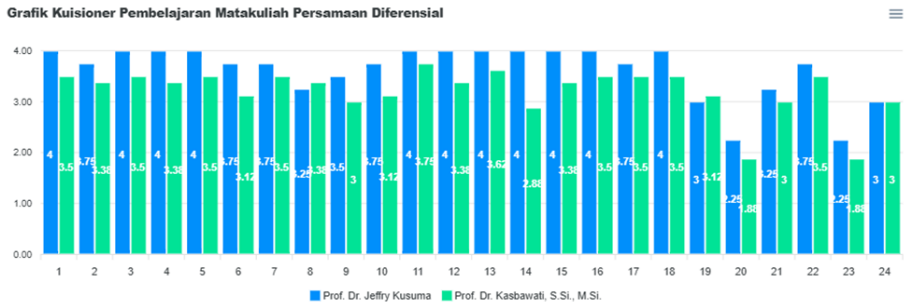
Course Grade	Number and Percentage of Students
A	4 (5.0%)
A-	3 (3.8%)

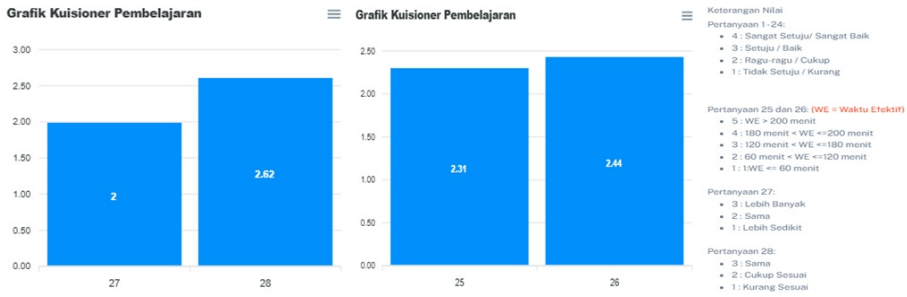
Course Grade	Number and Percentage of Students
B+	10 (12.5%)
B	12 (15.0%)
B-	16 (20.0%)
C+	19 (23.8%)
C	11 (13.8%)
D	1 (1.2%)
E	4 (5.0%)

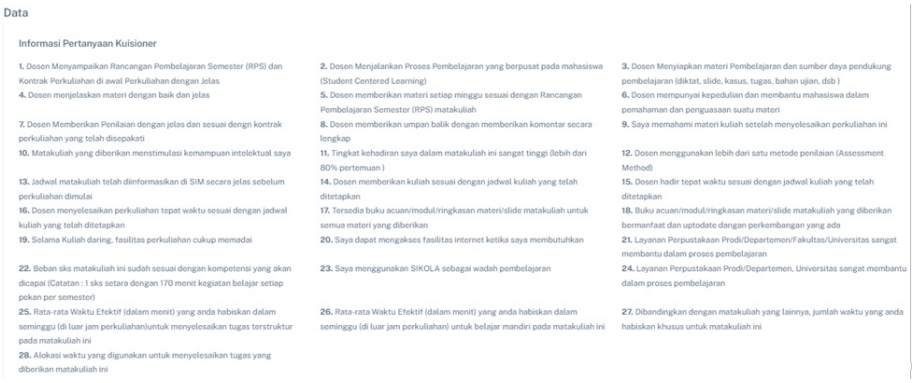
3. Learning evaluation (survey) results

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

Hasil Evaluasi Pembelajaran Matakuliah Persamaan Diferensial







Hasil Pengukuran CPL Mata Kuliah Persamaan Diferensial

4. Analysis and Reflection

Analysis and Reflection

Analysis

Analysis of the data shows that the performance of the Differential Equations 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 reflect possible problems that are fundamental to the design or pedagogical approach of the course, rather than simply difficulties with particular topics. There is a potential for misalignment between the complexity of the material, the teaching methods used, and students' initial ability to apply theoretical concepts to practical case studies. Therefore, the follow-up that is needed is not partial improvement, but rather a comprehensive structural review of the entire syllabus, teaching methods and evaluation system to fundamentally raise achievements.

5. Follow-up Plan

In response to learning outcomes that are consistently far below targets in the Differential Equations Course, the follow-up plan will focus on comprehensive structural interventions in the RPS. 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' ability to apply theoretical concepts to practical problem solving. 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 Differential Equations Course, an intervention has been implemented. This new supportive framework is set as a permanent standard to maintain consistent quality going forward in the next semester

Makassar, 21 Oktober 2025

Prof. Dr. Jeffry Kusuma
NIP 196411121987031002