

COURSE PORTFOLIO

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| Study Program | : MATHEMATICS - S1 |
| Semester | : ODD 2024/2025 |
| Course Code | : 23H01131803 |
| Course Name | : Special Topics in Combinatorics |
| Coordinator | : Prof. Dr. Nurdin, S.Si., M.Si. |
| Lecturer Team Member | : Prof. Dr. Nurdin, S.Si., M.Si., Prof. Dr. Hasmawati, 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 |
|-----------------------------------|--|--|
| | Prof. Dr. Hasmawati, M.Si. : 8 times | Number of students: 31 persons |
| Special Topics in Combinatorics A | Prof. Dr. Nurdin, S.Si., M.Si. : 8 times | Presence $\geq 80\%$: 30 persons (96.77 %) Presence $< 80\%$: 1 person (3.23 %) |
| | Total Meeting : 16 times. | |

Materials/practicum provided

Non-practical courses

Material provided

1. Learning Contract, RPS, distance and center of a graph
2. Introduction to Metric Dimension
3. Introduction to partition Dimension
4. Introduction to differential graphs.
5. Introduction to Theory Ramsey (Ramsey numbers of graphs, Size Ramsey numbers, graph-critical Ramsey numbers, rainbow Ramsey numbers, Multipartite Ramsey numbers)
6. Introduction to Labeling in graphs

The learning methods implemented

Several methods used:

1. Lectures
2. Discussion

3. Article search
4. Writing paper summaries and proposal drafts
5. Presentation

The assessment method implemented

1. Short Q&A
2. Project Report

Supplementary information (if available)

The project report is in the form of a draft thesis research proposal

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) |
|------------------------------------|-------|-----------------|---------|-------------------------------|
| KK2 | CLO-1 | Short Q&A | 5.00 % | 90.32 |
| KK2 | CLO-1 | Project Report | 20.00 % | 71.85 |
| KK2 | CLO-2 | Project Report | 15.00 % | 79.08 |
| KK2 | CLO-2 | Project Report | 20.00 % | 67.10 |
| KK3 | CLO-1 | Short Q&A | 5.00 % | 90.32 |
| KK3 | CLO-1 | Project Report | 20.00 % | 71.85 |
| KK3 | CLO-3 | Project Report | 15.00 % | 79.97 |
| KK3 | CLO-3 | Project Report | 10.00 % | 50.97 |
| S1 | CLO-1 | Short Q&A | 5.00 % | 90.32 |
| S1 | CLO-2 | Project Report | 15.00 % | 79.08 |
| S1 | CLO-2 | Project Report | 20.00 % | 67.10 |
| S1 | CLO-3 | Project Report | 15.00 % | 79.97 |
| S1 | CLO-3 | Project Report | 10.00 % | 50.97 |
| S2 | CLO-4 | Project Report | 15.00 % | 79.97 |
| S2 | CLO-4 | Project Report | 10.00 % | 50.97 |

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 | 45.16% |

| CLO | % of students who achieved a CLO score of at least 80 |
|-------|---|
| CLO-2 | 48.39% |
| CLO-3 | 19.35% |
| CLO-4 | 19.35% |

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 | 10 (32.3%) |
| A- | 7 (22.6%) |
| B+ | 9 (29.0%) |
| B | 1 (3.2%) |
| B- | 1 (3.2%) |
| C+ | 0 (0.0%) |
| C | 0 (0.0%) |
| D | 0 (0.0%) |
| E | 3 (9.7%) |

3. Learning evaluation (survey) results

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

Source Data:

Survey results from questionnaires given to students regarding courses.

1. Assessed aspects:

- Conformity of material with RPS.
- Effectiveness of learning methods (lectures, discussions, presentations, etc.).
- Use of assessments (questions and answers, project reports).
- Usefulness of courses in developing student competencies.

2. Summary Results:

- Percentage of students who were satisfied with the implementation of lectures: 85% felt the learning method was very helpful.
- Positive feedback: Students enjoyed researching articles and writing proposal drafts.
- Negative feedback: Some students felt the discussion material was not in-depth.

4. Analysis and Reflection

Gagal diterjemahkan

5. Follow-up Plan

- **Method Improvements:**

- Increase guidance in student projects, by holding additional consultation sessions.
- Increase practice questions and case studies to improve understanding of CPMK-2, CPMK-3, and CPMK-4.

- **Improvement Evaluation:**

- Using a more specific assessment rubric to make it easier for students to understand the assessment criteria.
- Involving students in group reflection to assess their projects independently.

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

1. Previous Evaluation Problems:

- Students felt there was not enough time for project consultation.
- CPMK related to the project was less than optimal.

2. Follow-up Efforts:

- This semester, project consultation time was increased to two sessions per weeks.
- The project is structured in stages: proposal writing is more structured than last semester.

3. Results:

- Students are better prepared to face the project report, although the achievements of CPMK-2 and CPMK-3 still require attention.

Makassar, 15 Oktober 2025

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