COURSE PORTFOLIO

Study Program	:	MATHEMATICS - S1
Semester	:	ODD 2024/2025
Course Code	:	23H01130703
Course Name	:	Mathematical Computation
Coordinator	:	Prof. Agustinus Ribal, S.Si.,M.Sc., Ph. D
Lecturer Team Member	:	Prof. Agustinus Ribal, S.Si.,M.Sc., Ph. D, Dr. Khaeruddin, M.Sc.

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
Mathematical Computation	Prof. Agustinus Ribal, S.Si.,M.Sc., Ph. D Dr. Khaeruddin, M.Sc. Total Meeting : 16 times.	: :	8 times 8 times	Number of students: 38 persons Presence ≥ 80% : 36 persons (94.74 %) Presence < 80% : 2 persons (5.26 %)

Materials/practicum provided

1. Numerical methods for initial-value problems
2. Systems of ordinary differential equations
3. Two-point boundary value problems
4. Vector and matrix norms, spectral radius, series of matrices and convergence
5. Iterative methods for large-scale linear systems of equations
6. Non-linear systems of equations

The learning methods implemented

Meeting 1:

Lecture: Group discussion (Small Group Discussion)

TM:1x3x50

2-3 Meetings

Lecture: Group discussion (Small Group Discussion)

TM:2x3x50

Meeting 4

Lecture: Group discussion (Small Group Discussion)

TM:1x3x50

Meeting 5

Lecture: Group discussion (Small Group Discussion)

TM:1x3x50

Meeting 6

Lecture: Group discussion (Small Group Discussion)

TM:1x3x50

Meeting 7

Lecture: Group discussion (Small Group Discussion)

TM:1x3x50

Meeting 8

Midterm Exam

Meeting 9-10

Lecture: Group discussion (Small Group Discussion)

TM:2x3x50

11-12 Meeting

Lecture: Group discussion (Small Group Discussion)

TM:2x3x50

13-15 Meeting

Lecture: Group discussion (Small Group Discussion)

TM:2x3x50

16th Meeting

Final Semester Exam

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)
KU1	CLO-1	Case Studies	15.00 %	9.26
KU1	CLO-1	Mid Test	20.00 %	13.32
KU1	CLO-1	Final Test	20.00 %	12.60
KU1	CLO-1	Case Studies	20.00 %	12.83
KU1	CLO-2	Final Test	20.00 %	12.60
KU1	CLO-2	Case Studies	15.00 %	9.04
KU1	CLO-2	Mid Test	20.00 %	13.32
KU1	CLO-2	Case Studies	20.00 %	12.83
KK2	CLO-4	Case Studies	15.00 %	9.26
KK2	CLO-4	Final Test	20.00 %	12.60
KK2	CLO-4	Case Studies	10.00 %	8.78
KK2	CLO-4	Case Studies	20.00 %	12.83
KK2	CLO-4	Mid Test	20.00 %	13.32
KK3	CLO-5	Case Studies	10.00 %	8.78
KK3	CLO-5	Mid Test	20.00 %	13.32
KK3	CLO-5	Case Studies	15.00 %	9.48
KK3	CLO-5	Final Test	20.00 %	12.60

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	18.42%
CLO-2	23.68%
CLO-4	21.05%
CLO-5	23.68%
CLO-3	0.00%

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

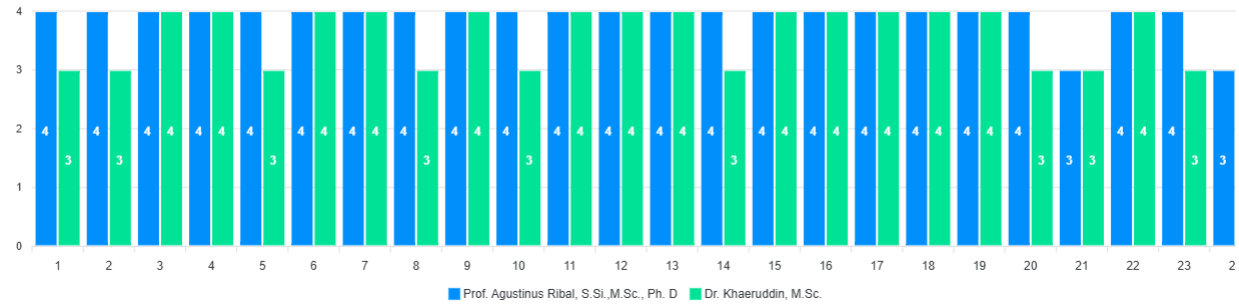
Course Grade	Number and Percentage of Students
A	4 (10.5%)
A-	7 (18.4%)
B+	8 (21.1%)
B	7 (18.4%)
B-	5 (13.2%)

Course Grade	Number and Percentage of Students
C+	3 (7.9%)
C	2 (5.3%)
D	1 (2.6%)
E	4 (10.5%)

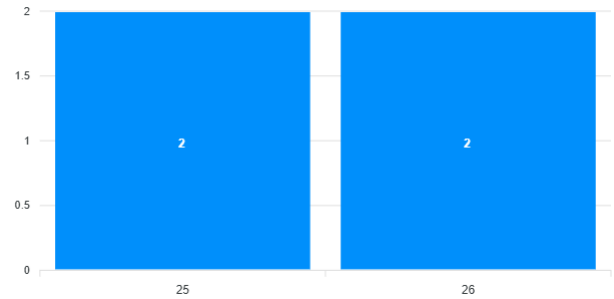
3. Learning evaluation (survey) results

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

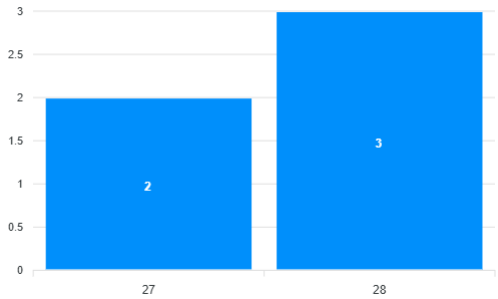
Grafik Kuisioner Pembelajaran Matakuliah Komputasi Matematika



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 : 1:WE <= 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 pemahama 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

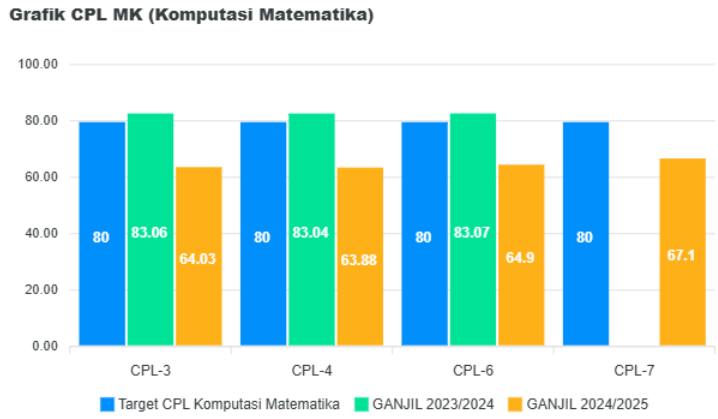
24. Layanan Perpustakaan Prodi/Departemen,Universitas sangat membantu proses pembelajaran

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 Komputasi Matematika

4. Analysis and Reflection

Analysis and Reflection

The distribution of values shows:

- **Value very good (A, A-)**: 11 students (28.9%)
- **Good value (B+, B)**: 15 students (39.5%)
- **Value enough (B-, C+, C, D)**: 11 students (28.9%)
- **Value did not pass (E)**: 4 students (10.5%)

Reflection:

- In general, Student performance is relatively good, with almost 70% of students gaining grades A to B.
- However, there is a group of students (around 29%) who are in the category enough to barely pass, and 4 students (10.5%) who didn't pass (grade E).
- This shows that there are quite wide variations in learning outcomes, indicates that some students may experience difficulties in understanding the material or not participating actively during lectures.

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5. Follow-up Plan

1. **Search Causes of Low Values (D and E)**
   Identify students who get D and E grades, to find out whether the obstacles they experience are academic, personal, or administrative .
2. **Giving Remedial or Academic Assistance Program**
   Providing opportunities for students with low grades to take part additional or remedial learning if possible in accordance with study program policies.
3. **Improvement Learning Strategy**
   Integrate a more interactive and learning approach adaptive, such as small group discussions, weekly quizzes, or use visual media that helps understand concepts.
4. **Improvement Formative Evaluation**
   Provide more formative evaluations to monitor progress students from the start and provide constructive feedback.
5. **Arrangement Leveled Material and Questions**
   Arrange material and practice questions with gradual levels of difficulty so that Students can proceed gradually and systematically in understanding material.
6. **Engagement Students in Self-Evaluation**
   Invite students to reflect on their learning achievements to increase self-awareness and motivation to learn.

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

Following the findings of the previous semester's evaluation for the Mathematical Computation Course, which showed a sharp and uniform decline in performance in CPL-3, 4, and 6 (from 83 to 64), an intervention plan focusing on practical and evaluation aspects has been implemented. The investigation led to changes to the practicum module, so it was revised to make it more structured and the final project assessment criteria were readjusted to align with the learning objectives. It is important to align the practicum modules and final assessments in computing courses, and recommend that the new practicum structure be maintained.

Makassar, 24 Oktober 2025

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