

COURSE PORTFOLIO

Study Program	: MATHEMATICS - S1
Semester	: EVEN 2024/2025
Course Code	: 23H01110604
Course Name	: Algorithms and Programming
Coordinator	: Dr. Khaeruddin, M.Sc.
Lecturer Team Member	: Dr. Khaeruddin, M.Sc., 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
Algorithms and Programming A	Prof. Dr. Jeffry Kusuma	: 8 times	Number of students: 49 persons
	Dr. Khaeruddin, M.Sc.	: 8 times	Presence ≥ 80% : 46 persons (93.88 %)
			Presence < 80% : 3 persons (6.12 %)
	Total Meeting : 16 times.		
Algorithms and Programming B	Prof. Dr. Jeffry Kusuma	: 8 times	Number of students: 46 persons
	Dr. Khaeruddin, M.Sc.	: 8 times	Presence ≥ 80% : 46 persons (100.00 %)
			Presence < 80% : 1 person (2.17 %)
	Total Meeting : 16 times.		

Materials/practicum provided

Definition of Algorithm, Programming Paradigm, algorithm notation (Definition of Algorithm, Paradigm of Programming, Algorithm Notation), Introduction to programming language, variables, data types and operators in programming language (Introduction to Programming language, variables, operators), Selection of conditions (Conditional Branching), Looping, Arrays, Sub programs in the form of functions and procedures, Error Handling

The learning methods implemented

Discovery Learning, Case Study

The assessment method implemented

1. Quiz
2. Case Studies
3. 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	14.28 %	56.12
ILO 1	CLO-1	Independent Assignment	20.00 %	45.65
ILO 1	CLO-1	Quiz	15.00 %	71.74
ILO 1	CLO-1	Case Studies	28.58 %	68.21
ILO 1	CLO-1	Case Studies	25.00 %	66.09
ILO 1	CLO-1	Case Studies	14.28 %	50.61
ILO 1	CLO-4	Case Studies	14.28 %	50.61
ILO 1	CLO-4	Independent Assignment	20.00 %	45.65
ILO 1	CLO-4	Case Studies	28.58 %	68.21
ILO 1	CLO-4	Quiz	15.00 %	71.74
ILO 1	CLO-4	Case Studies	25.00 %	66.09
ILO 1	CLO-4	Independent Assignment	14.28 %	60.20
KK2	CLO-2	Case Studies	25.00 %	66.09
KK2	CLO-2	Case Studies	14.28 %	50.61
KK2	CLO-2	Independent Assignment	20.00 %	45.65
KK2	CLO-2	Independent Assignment	14.28 %	60.20
KK2	CLO-2	Quiz	15.00 %	71.74
KK2	CLO-2	Case Studies	28.58 %	68.21
KK3	CLO-2	Case Studies	25.00 %	66.09
KK3	CLO-2	Independent Assignment	20.00 %	45.65
KK3	CLO-2	Independent Assignment	14.28 %	60.20
KK3	CLO-2	Case Studies	28.58 %	68.21
KK3	CLO-2	Quiz	15.00 %	71.74
KK3	CLO-2	Case Studies	14.28 %	50.61

LOs that are charged to the Course	CLO	Assessment Form	Weight	Average student score (0-100)
KK3	CLO-3	Case Studies	28.58 %	68.21
KK3	CLO-3	Quiz	15.00 %	71.74
KK3	CLO-3	Independent Assignment	14.28 %	60.20
KK3	CLO-3	Case Studies	25.00 %	66.09
KK3	CLO-3	Case Studies	14.28 %	50.61
KK3	CLO-3	Independent Assignment	20.00 %	45.65
KK3	CLO-4	Case Studies	25.00 %	66.09
KK3	CLO-4	Independent Assignment	20.00 %	45.65
KK3	CLO-4	Quiz	15.00 %	71.74
KK3	CLO-4	Case Studies	28.58 %	68.21
KK3	CLO-4	Independent Assignment	14.28 %	60.20
KK3	CLO-4	Case Studies	14.28 %	50.61
S2	CLO-4	Independent Assignment	20.00 %	45.65
S2	CLO-4	Case Studies	25.00 %	66.09
S2	CLO-4	Independent Assignment	14.28 %	60.20
S2	CLO-4	Case Studies	28.58 %	68.21
S2	CLO-4	Quiz	15.00 %	71.74
S2	CLO-4	Case Studies	14.28 %	50.61
KK1	CLO-1	Independent Assignment	14.28 %	56.12
KK1	CLO-1	Case Studies	14.28 %	50.61
KK1	CLO-1	Case Studies	25.00 %	66.09
KK1	CLO-1	Case Studies	28.58 %	68.21
KK1	CLO-1	Quiz	15.00 %	71.74
KK1	CLO-1	Independent Assignment	20.00 %	45.65
KK1	CLO-2	Case Studies	14.28 %	50.61
KK1	CLO-2	Case Studies	25.00 %	66.09
KK1	CLO-2	Case Studies	28.58 %	68.21
KK1	CLO-2	Quiz	15.00 %	71.74

LOs that are charged to the Course	CLO	Assessment Form	Weight	Average student score (0-100)
KK1	CLO-2	Independent Assignment	14.28 %	60.20
KK1	CLO-2	Independent Assignment	20.00 %	45.65

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	0.00%
CLO-3	0.00%
CLO-4	0.00%

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	0 (0.0%)
A-	0 (0.0%)
B+	3 (3.2%)
B	46 (48.4%)
B-	24 (25.3%)
C+	5 (5.3%)
C	5 (5.3%)
D	2 (2.1%)
E	10 (10.5%)

3. Learning evaluation (survey) results

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

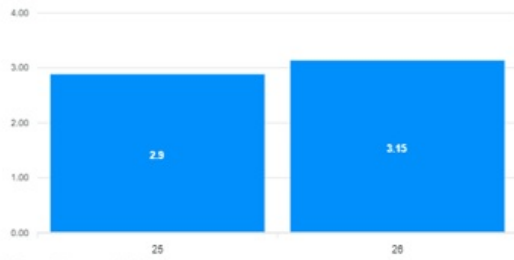
Hasil Evaluasi pembelajaran mata kuliah Algoritma dan Pemrograman

Grafik Kuisioner Pembelajaran Matakuliah Algoritma dan Pemrograman



- Keterangan Nilai
- Pertanyaan 1-24:
- 4 : Sangat Setuju/ Sangat Baik
 - 3 : Setuju / Baik
 - 2 : Ragu-ragu / Cukup
 - 1 : Tidak Setuju / Kurang

Grafik Kuisioner Pembelajaran

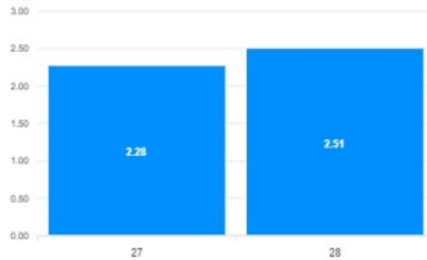


Informasi Pertanyaan Kuisioner

Informasi Pertanyaan Kuisioner

- Dosen Menyampaikan Rancangan Pembelajaran Semester (RPS) dan Kontrak Perkuliahan di awal Perkuliahan dengan jelas
- Dosen Menjelaskan materi dengan baik dan jelas
- Dosen Memberikan Penilaian dengan jelas dan sesuai dengan kontrak perkuliahan yang telah disepakati
- Matakuliah yang diberikan menstimulasi kemampuan intelektual saya
- Jadwal matakuliah telah diinformasikan di SIM secara jelas sebelum perkuliahan dimulai
- Dosen menyelesaikan perkuliahan tepat waktu sesuai dengan jadwal kuliah yang telah ditetapkan
- Selama Kuliah daring, fasilitas perkuliahan cukup memadai
- Beban sks matakuliah ini sudah sesuai dengan kompetensi yang akan dicapai (Catatan : 1 sks setara dengan 170 menit kegiatan belajar setiap pekan per semester)
- Rata-rata Waktu Efektif (dalam menit) yang anda habiskan dalam seminggu (di luar jam perkuliahan) untuk menyelesaikan tugas terstruktur pada matakuliah ini
- Dosen menjalankan Proses Pembelajaran yang berpusat pada mahasiswa (Student Centered Learning)
- Dosen memberikan materi setiap minggu sesuai dengan Rancangan Pembelajaran Semester (RPS) matakuliah
- Dosen memberikan umpan balik dengan memberikan komentar secara lengkap
- Tingkat kehadiran saya dalam matakuliah ini sangat tinggi (lebih dari 80% pertemuan)
- Dosen memberikan kuliah sesuai dengan jadwal kuliah yang telah ditetapkan
- Tersedia buku acuan/modul/lingkasan materi/slide matakuliah untuk semua materi yang diberikan
- Saya dapat mengakses fasilitas internet ketika saya membutuhkan
- Saya menggunakan SIKOLA sebagai wadah pembelajaran
- Rata-rata Waktu Efektif (dalam menit) yang anda habiskan dalam seminggu (di luar jam perkuliahan) untuk belajar mandiri pada matakuliah ini

Grafik Kuisioner Pembelajaran



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:

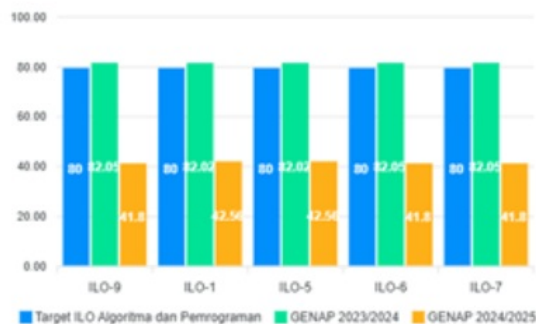
- 3 : Lebih Banyak
- 2 : Sama
- 1 : Lebih Sedikit

Pertanyaan 28:

- 3 : Sama
- 2 : Cukup Sesuai
- 1 : Kurang Sesuai

Hasil Pengukuran CPL Mata Kuliah Algoritma dan Pemrograman

Grafik ILO MK (Algoritma dan Pemrograman)



4. Analysis and Reflection

Analysis

1. Very Sharp and Comprehensive Performance Decline

The data shows an extraordinarily sharp and comprehensive decline in performance across all measured Graduate Learning Outcomes (CPL). The performance of courses which in the EVEN 2023/2024 period was very superior with an average score of 82 (above the target of 80), has collapsed in the EVEN 2024/2025 period to a very low level with an average score of only 42, or a decrease of around 40 points.

2. Uniformity of Failure Patterns Across All CPLs

Further analysis shows that this failure pattern occurs with a very high degree of uniformity. All five CPLs (ILO-9, ILO-1, ILO-5, ILO-6, and ILO-7) ended with almost identical scores, namely within a very narrow range of 41.8 to 42.54. This uniformity is a key indicator in understanding the nature of the problem that occurs.

Reflection

1. Evaluation Problems

The uniformity of the pattern of drastic decline across all CPLs reflects that the root of the problem most likely does not lie in students' difficulties with different specific topics. On the contrary, this is a strong indication of the existence of a single systemic problem that has an even impact on all aspects of the evaluation, such as the possibility of a final evaluation instrument (UAS) that is flawed, miscalibrated, or completely out of sync with the learning process that has been implemented.

2. The Urgency of Fundamental Investigation and Immediate Intervention

A decline of 40 points indicates a critical failure in the learning and evaluation process for that period. The reflection is that this situation does not allow for partial or gradual improvement, but demands fundamental investigation and emergency intervention. Top priority must be given to auditing the total implementation of the course, especially the design of the final assessment, in order to prevent the recurrence of similar failures and to guarantee the quality of education in this very important basic course.

5. Follow-up Plan

Teaching strategies will be optimized by integrating problem-based learning (PBL) methods to increase students' understanding and practical abilities in solving problems. In addition, additional or remedial classes will be held for students who have low achievements as well as providing graded practice question modules to facilitate independent practice.

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

Following up on the findings of the previous semester's evaluation for the Algorithms and Programming Course, a centralized intervention has been implemented. There needs to be validity of the final assessment and there is a need to standardize the question creation process to ensure consistent quality in the future.

Makassar, 17 Oktober 2025

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