

SEMESTER LEARNING PLAN

**NUMBER THEORY COURSES
(23H01122003)**



TEACHING TEAM

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STUDI PROGRAM OF MATHEMATICS - S1
FACULTY OF MATHEMATICS AND NATURAL SCIENCES
HASANUDDIN UNIVERSITY
MAKASSAR
2025

**STUDY PROGRAM OF MATEMATIKA - S1
FACULTY OF MATHEMATICS AND NATURAL SCIENCES
HASANUDDIN UNIVERSITY**

Vision

The scientific vision is to become a study program with an international reputation in the development of mathematics based on the Indonesian maritime continent by 2030

Vision Strategy

Mission

To fulfill the above vision, the Undergraduate Mathematics Study Program has four missions, namely:

- Organizing innovative and effective mathematics learning to improve the quality and creativity of students in order to compete nationally and internationally.
- Improving a research culture that produces internationally reputable publications.
- Playing an active role in community service activities and collaborating with other academic institutions, government, business, media and society.
- Carry out governance in the Mathematics Study Program that is effective, efficient and transparent based on IT and ISO 9001:2015 standards to achieve the tridharma goals.

Graduate Profiles

Gagal diterjemahkan

PLO charged to courses

CPL-1 (ILO 1) - Students are able to demonstrate an advanced understanding of basic pure and simple applied mathematics.

CPL-2 (P2) - The students are able to identify objects, techniques, and theorems in fundamental mathematics, and making a connection for solving problems

CPL-3 (KU1) - The students are able to analyse a mathematical problem with logic, analytic, and systematic structure

Course Learning Outcomes (CLO)

CPMK-1: Obey mutually agreed rules, be disciplined in carrying out tasks, and respect other people's opinions (CPL1)

CPMK-2: Be aware of your role as a learner in the classroom by showing activeness in the learning process (CPL2)

CPMK-3: Internalize the spirit of independence in doing assignments and exams (CPL3)

CPMK-4: Able to arrange stages for completing tasks and choose appropriate methods for completing tasks (CPL3)

CPMK-5: Able to work together and communicate in a team and be responsible for the work. (CPL3)

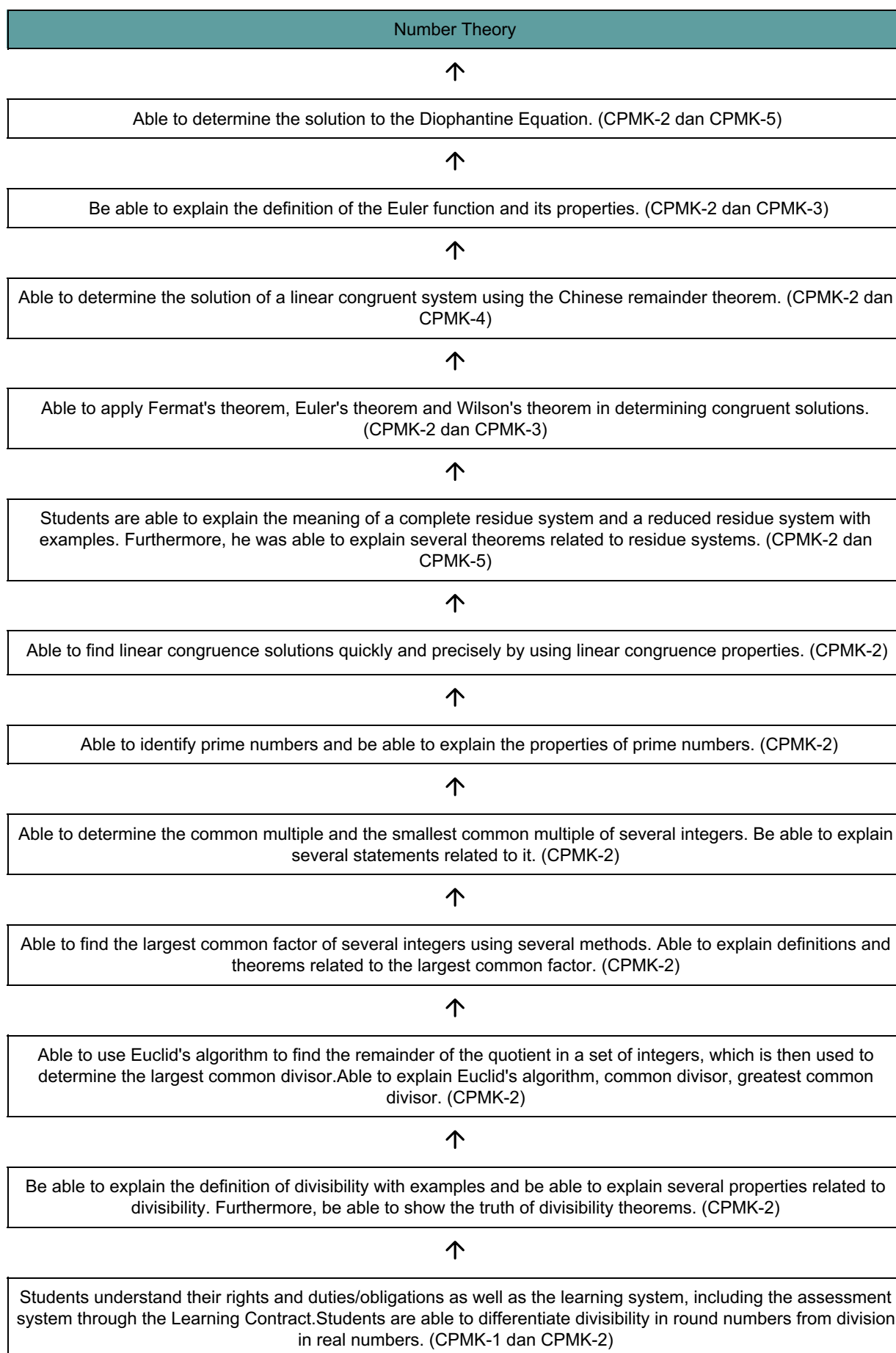
Sub-CLO

Sub CPMK-1: Students understand their rights and duties/obligations as well as the learning system, including the assessment system through the Learning Contract. Students are able to differentiate divisibility in round numbers from division in real numbers. (CPMK-1 dan CPMK-2)

Sub CPMK-2: Be able to explain the definition of divisibility with examples and be able to explain several properties related to divisibility. Furthermore, be able to show the truth of divisibility theorems. (CPMK-2)

- Sub CPMK-3: Able to use Euclid's algorithm to find the remainder of the quotient in a set of integers, which is then used to determine the largest common divisor. Able to explain Euclid's algorithm, common divisor, greatest common divisor. (CPMK-2)
- Sub CPMK-4: Able to find the largest common factor of several integers using several methods. Able to explain definitions and theorems related to the largest common factor. (CPMK-2)
- Sub CPMK-5: Able to determine the common multiple and the smallest common multiple of several integers. Be able to explain several statements related to it. (CPMK-2)
- Sub CPMK-6: Able to identify prime numbers and be able to explain the properties of prime numbers. (CPMK-2)
- Sub CPMK-7: Able to find linear congruence solutions quickly and precisely by using linear congruence properties. (CPMK-2)
- Sub CPMK-8: Students are able to explain the meaning of a complete residue system and a reduced residue system with examples. Furthermore, he was able to explain several theorems related to residue systems. (CPMK-2 dan CPMK-5)
- Sub CPMK-9: Able to apply Fermat's theorem, Euler's theorem and Wilson's theorem in determining congruent solutions. (CPMK-2 dan CPMK-3)
- Sub CPMK-10: Able to determine the solution of a linear congruent system using the Chinese remainder theorem. (CPMK-2 dan CPMK-4)
- Sub CPMK-11: Be able to explain the definition of the Euler function and its properties. (CPMK-2 dan CPMK-3)
- Sub CPMK-12: Able to determine the solution to the Diophantine Equation. (CPMK-2 dan CPMK-5)

Learning Analytics



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Have passed the course Mathematical Logic and Sets



HASANUDDIN UNIVERSITY

FAKULTY OF MATHEMATICS AND NATURAL SCIENCES

STUDY PROGRAM OF MATHEMATICS - S1

SEMESTER LEARNING PLAN

Course		Code	Course Group	Credits	SEMESTER	Compilation Date
Number Theory		23H01122003	Algebra	3	4	10 Agustus 2024
AUTHORITY		SLP Developer Lecturer		Coordinator		Head of Study Program
		Nur Rohmah Oktaviani Putri, S.Si., M.Si		Dr. Muhammad Zakir, M.Si.		Dr. Firman, S.Si.,M.Si.
Learning Outcomes	SLOs that are imposed on the course					
	SLO-1:	Mahasiwa memiliki pemahaman yang relatif mendalam dalam matematika murni dan matematika terapan sederhana.				
	SLO-2:	Mahasiswa mampu mengidentifikasi objek, teknik, dan sifat dalam matematika dasar, dan membuat koneksi untuk menyelesaikan masalah				
	SLO-3:	Mahasiswa mampu menganalisis suatu masalah matematika dengan logika, analitik, dan struktur sistematis				
	SLO ⇒ Course Learning Outcomes					
	After completing this course, it is expected:					
	SLO-1	CLO-1: Obey mutually agreed rules, be disciplined in carrying out tasks, and respect other people's opinions				
	SLO-2	CLO-2: Be aware of your role as a learner in the classroom by showing activeness in the learning process				
	SLO-3	CLO-3: Internalize the spirit of independence in doing assignments and exams				
		CLO-4: Able to arrange stages for completing tasks and choose appropriate methods for completing tasks				
		CLO-5: Able to work together and communicate in a team and be responsible for the work.				
	CLO ⇒ Sub-CLO					
	CLO-1	Sub-CLO-1:Students understand their rights and duties/obligations as well as the learning system, including the assessment system through the Learning Contract.Students are able to differentiate divisibility in round numbers from division in real numbers.				
		Sub-CLO-1:Students understand their rights and duties/obligations as well as the learning system, including the assessment system through the Learning Contract.Students are able to differentiate divisibility in round numbers from division in real numbers.				
		Sub-CLO-2:Be able to explain the definition of divisibility with examples and be able to explain several properties related to divisibility. Furthermore, be able to show the truth of divisibility theorems.				
		Sub-CLO-3:Able to use Euclid's algorithm to find the remainder of the quotient in a set of integers, which is then used to determine the largest common divisor.Able to explain Euclid's algorithm, common divisor, greatest common divisor.				

Course	CLO-2	Sub-CLO-4:Able to find the largest common factor of several integers using several methods. Able to explain definitions and theorems related to the largest common factor.										
		Sub-CLO-5:Able to determine the common multiple and the smallest common multiple of several integers. Be able to explain several statements related to it.										
		Sub-CLO-6:Able to identify prime numbers and be able to explain the properties of prime numbers.										
		Sub-CLO-7:Able to find linear congruence solutions quickly and precisely by using linear congruence properties.										
		Sub-CLO-8:Students are able to explain the meaning of a complete residue system and a reduced residue system with examples. Furthermore, he was able to explain several theorems related to residue systems.										
		Sub-CLO-9:Able to apply Fermat's theorem, Euler's theorem and Wilson's theorem in determining congruent solutions.										
		Sub-CLO-10:Able to determine the solution of a linear congruent system using the Chinese remainder theorem.										
		Sub-CLO-11:Be able to explain the definition of the Euler function and its properties.										
		Sub-CLO-12:Able to determine the solution to the Diophantine Equation.										
	CLO-3	Sub-CLO-9:Able to apply Fermat's theorem, Euler's theorem and Wilson's theorem in determining congruent solutions.										
		Sub-CLO-11:Be able to explain the definition of the Euler function and its properties.										
	CLO-4	Sub-CLO-10:Able to determine the solution of a linear congruent system using the Chinese remainder theorem.										
	CLO-5	Sub-CLO-8:Students are able to explain the meaning of a complete residue system and a reduced residue system with examples. Furthermore, he was able to explain several theorems related to residue systems.										
		Sub-CLO-12:Able to determine the solution to the Diophantine Equation.										
Correlation between SLOs/CLOs to Sub-CLOs												

SLOs that are charged on the Course	CPMK	SUB CPMK	Form of Assessment*					Weight	Value	Student Score
			Formative	Sumative						
				Independent Assignment	Case Studies	Written Exam	Written Exam			
SLO-2	CLO-2	SUB-CLO-2	Question and answer	5	0	0	0	5		
SLO-2	CLO-2	SUB-CLO-3	Question and answer	5	0	0	0	5		
SLO-2	CLO-2	SUB-CLO-5	Question and answer	0	10	0	0	10		
SLO-2	CLO-2	SUB-CLO-6	Question and answer	0	10	0	0	10		
SLO-2	CLO-2	SUB-CLO-7	Question and answer	0	0	20	0	20		
SLO-3	CLO-5	SUB-CLO-8	Question and answer	5	0	0	0	5		

SLOs that are charged on the Course	CPMK	SUB CPMK	Form of Assessment*					Weight	Value	Student Score
			Formative	Sumative						
				Independent Assignment	Case Studies	Written Exam	Written Exam			
SLO-3	CLO-4	SUB-CLO-10	Question and answer	0	10	0	0	10		
SLO-3	CLO-3	SUB-CLO-11	Question and answer	5	0	0	0	5		
SLO-3	CLO-5	SUB-CLO-12	Question and answer	0	10	0	20	30		
				20	40	20	20	100		
Course Description	The Number Theory course is designed so that after taking this course; Students master the concept of number theory, which is demonstrated by the ability to work individually and in teams in applying the concepts of the integer system and its properties, obeying mutually agreed rules, being disciplined in carrying out assignments, and respecting other people's opinions, always internalizing the spirit of learning and independence. In general, the main points of learning number theory are as follows: Integer divisibility, congruence, prime factorization (greatest common divisor, least common multiple and the Basic Theorem of Arithmetic), linear diophantine equations, other applications of congruence (Chinese Remainder Theorem, Fermat's Theorem, Euler's Theorem and Wilson's Theorem) in solving mathematical problems well: To be able to develop these learning outcomes then students will study the integer system and its properties, congruence, prime factorization (covering GCF and LCM, prime numbers and the Basic Theorem of Arithmetic), linear diophantine equations (covering Euclid's Algorithm, Linear Congruence, and Chinese Remainder Theorem), other applications of integer congruence: Fermat's, Wilson's and Euler									
Learning Materials/Subjects	1. Division (Division) 2. Euclid's algorithm (Euclid's algorithm) 3. Common divider 4. Joint Multiple 5. Prime (Prime) 6. Congruence (congruence) 7. Complete and Reduced Residue Systems 8. Linear Congruence and Diophantine Equations (Linear Collaboration and Diophantine Equations) 9. Euler's generalization and its application 10. Chinese Remainder Theorem 11. Euler's function 12. Prime Power Modulo (Quadratic prime modulo)									
	Main References									

Reference		1. I. Niven, H.S. Zuckerman, H.L. Montgomery, An Introduction To The Theory of Number, John Wiley & Sons, 5-th Edition, 2006. 2. Nur Erawaty, Loecky Haryanto, Syamsuddin Toaha, Learning Module for Number Theory Course, Unhas, 2009.					
		Additional References					
		Gagal diterjemahkan					
Teaching Team		Dra. Nur Erawati, M.Si., Dr. Muhammad Zakir, M.Si., Nur Rohmah Oktaviani Putri, S.Si., M.Si					
Course requirement		Mathematical Logic and Sets					
Week	Sub CPMK (End-of-stage learning ability)	Penilaian (Assesment)		Learning Forms and Methods [time estimate]		Content	Weight of Assessment (%)
		Indicator	Techniques & Criteria	Offline	Online		
1	2	3	4	5	6	7	8
1	Students understand their rights and duties/obligations as well as the learning system, including the assessment system through the Learning Contract. Students are able to differentiate divisibility in round numbers from division in real numbers. (CPMK-1, CPMK-2)	Formative: Gagal diterjemahkan Sumative: -	Formative Criteria: Question and answer dinilai dengan rubrik 04 Sumative Criteria: Assessment Technique: Gagal diterjemahkan	Studying: Discovery Learning 3x50		Lecture Contract Introduction to the concept of divisibility	0
2	Be able to explain the definition of divisibility with examples and be able to explain several properties related to divisibility. Furthermore, be able to show the truth of divisibility theorems. (CPMK-2)	Formative: Gagal diterjemahkan Sumative: Accuracy indicates the correctness of the divisibility theorem	Formative Criteria: Question and answer dinilai dengan rubrik 04 Sumative Criteria: Independent Assignment (5) dinilai dengan rubrik 01 Assessment Technique: Test and Non-Test	Studying: Discovery Learning 3x50		Definition of divisibility, examples and related theorems.	5

3	Able to use Euclid's algorithm to find the remainder of the quotient in a set of integers, which is then used to determine the largest common divisor. Able to explain Euclid's algorithm, common divisor, greatest common divisor. (CPMK-2)	Formative: Gagal diterjemahkan Sumative: Accuracy in calculating the greatest common divisor using Euclid's algorithm.	Formative Criteria: Question and answer dinilai dengan rubrik 04 Sumative Criteria: Independent Assignment (5) dinilai dengan rubrik 01 Assessment Technique: Test and Non-Test	Studying: Discovery Learning 3x50		Euclid's algorithm, common divisor, greatest common divisor.	5
4	Able to find the largest common factor of several integers using several methods. Able to explain definitions and theorems related to the largest common factor. (CPMK-2)	Formative: Gagal diterjemahkan Sumative: The accuracy of finding common factors or the largest common factors. Accuracy indicates the truth of several statements regarding the greatest common divisor.	Formative Criteria: Question and answer dinilai dengan rubrik 04 Sumative Criteria: Assessment Technique: Non Test	Studying: Discovery Learning 3x50		Understanding common factors, greatest common factors, prime relativity and several theorems related to them.	0
5	Able to determine the common multiple and the smallest common multiple of several integers. Be able to explain several statements related to it. (CPMK-2)	Formative: Gagal diterjemahkan Sumative: The accuracy of calculating the smallest common multiple in several ways.	Formative Criteria: Question and answer dinilai dengan rubrik 04 Sumative Criteria: Case Studies (10) dinilai dengan rubrik 01 Assessment Technique: Test	Studying: Discovery Learning 2x3x50		Common multiples, least common multiples, related theorems.	10

6	Able to identify prime numbers and be able to explain the properties of prime numbers. (CPMK-2)	Formative: Gagal diterjemahkan Sumative: The accuracy of identifying a prime number and the accuracy in proving a theorem are related with	Formative Criteria: Question and answer dinilai dengan rubrik 04 Sumative Criteria: Case Studies (10) dinilai dengan rubrik 02 Assessment Technique: Test and Non-Test	Studying: Case Study (Case Study) 2x3x50		Definition of prime numbers, properties of prime numbers, theorems related to prime numbers	10
7	Able to find linear congruence solutions quickly and precisely by using linear congruence properties. (CPMK-2)	Formative: Gagal diterjemahkan Sumative: Accuracy in calculating linear congruence solutions and skills in utilizing properties	Formative Criteria: Question and answer dinilai dengan rubrik 04 Sumative Criteria: Assessment Technique: Non Test	Studying: Discovery Learning 3x50		Definition of congruence, solution of linear congruence, related to theorems.	0
8	Able to find linear congruence solutions quickly and precisely by using linear congruence properties. (CPMK-2)	Formative: Gagal diterjemahkan Sumative: Gagal diterjemahkan	Formative Criteria: Sumative Criteria: Written Exam (20) dinilai dengan rubrik 01 Assessment Technique: Gagal diterjemahkan			Gagal diterjemahkan	20

9	Students are able to explain the meaning of a complete residue system and a reduced residue system with examples. Furthermore, he was able to explain several theorems related to residue systems. (CPMK-2, CPMK-5)	Formative: Gagal diterjemahkan Sumative: The accuracy of selecting complete or reduced residue systems using their properties. Accuracy of analyzing residue systems.	Formative Criteria: Question and answer dinilai dengan rubrik 04 Sumative Criteria: Independent Assignment (5) dinilai dengan rubrik 01 Assessment Technique: Gagal diterjemahkan	Studying: Discovery Learning 3x50		Complete residue system definition with examples, reduced residue system definition with examples, theorem related.	5
10	Able to apply Fermat's theorem, Euler's theorem and Wilson's theorem in determining congruent solutions. (CPMK-2, CPMK-3)	Formative: Gagal diterjemahkan Sumative: The accuracy of applying the theorem in congruence problems.	Formative Criteria: Question and answer dinilai dengan rubrik 04 Sumative Criteria: Assessment Technique: Non Test	Studying: Discovery Learning 3x50		Fermat's theorem, Euler's theorem, Wilson's theorem with consequences and examples.	0
11	Able to determine the solution of a linear congruent system using the Chinese remainder theorem. (CPMK-2, CPMK-4)	Formative: Gagal diterjemahkan Sumative: Accuracy determine the joint solution of several linear congruences.	Formative Criteria: Question and answer dinilai dengan rubrik 04 Sumative Criteria: Case Studies (10) dinilai dengan rubrik 01 Assessment Technique: Test	Studying: Discovery Learning 2x3x50		Chinese remainder theorem and examples.	10

12	Be able to explain the definition of the Euler function and its properties. (CPMK-2, CPMK-3)	Formative: Gagal diterjemahkan Sumative: The accuracy of determining the joint solution of several linear congruences.	Formative Criteria: Question and answer dinilai dengan rubrik 04 Sumative Criteria: Independent Assignment (5) dinilai dengan rubrik 01 Assessment Technique: Non Test	Studying: Discovery Learning 3x50		Euler functions with related theorems	5
13	Able to determine the solution to the Diophantine Equation. (CPMK-2, CPMK-5)	Formative: Gagal diterjemahkan Sumative: The accuracy of choosing a solution to the Diophantine Equation	Formative Criteria: Question and answer dinilai dengan rubrik 04 Sumative Criteria: Case Studies (10) dinilai dengan rubrik 04 Assessment Technique: Non Test	Studying: Case Study (Case Study) 2x3x50		Diophantine Equation	10
14-15	Able to determine the solution to the Diophantine Equation. (CPMK-2, CPMK-5)	Formative: Gagal diterjemahkan Sumative: Gagal diterjemahkan	Formative Criteria: Sumative Criteria: Assessment Technique: Gagal diterjemahkan			Gagal diterjemahkan	0

16	Able to determine the solution to the Diophantine Equation. (CPMK-2, CPMK-5)	Formative: Gagal diterjemahkan Sumative: Gagal diterjemahkan	Formative Criteria: Sumative Criteria: Written Exam (20) dinilai dengan rubrik 01 Assessment Technique: Gagal diterjemahkan			Gagal diterjemahkan	20
							100

Matrix of SLO, CLO, and Assessment Method

SLO / CLO	CLO-1	CLO-2	CLO-3	CLO-4	CLO-5
CPL-1 (ILO 1)					
CPL-2 (P2)		Independent Assignment (Weight 5%) Independent Assignment (Weight 5%) Case Studies (Weight 10%) Case Studies (Weight 10%) Written Exam (Weight 20%) Independent Assignment (Weight 5%) Case Studies (Weight 10%) Independent Assignment (Weight 5%) Case Studies (Weight 10%) Written Exam (Weight 20%)			
CPL-3 (KU1)			Independent Assignment (Weight 5%)	Case Studies (Weight 10%)	Independent Assignment (Weight 5%) Case Studies (Weight 10%) Written Exam (Weight 20%)

Evaluation Type and Assessment Weight

Type	Assessment Weight
Independent Assignment	20
Case Studies	40
Written Exam	20
Written Exam	20
Total	100

Assessment and Evaluation of Student Achievement of CLOs

SLOs that are charged on the Course	CLO	SUB CLO	Form of Assessment*					Weight	Value	Student Score
			Formative	Sumative						
				Independent Assignment	Case Studies	Written Exam	Written Exam			
SLO-2	CLO-2	SUB-CLO-2	Question and answer	5	0	0	0	5		
SLO-2	CLO-2	SUB-CLO-3	Question and answer	5	0	0	0	5		
SLO-2	CLO-2	SUB-CLO-5	Question and answer	0	10	0	0	10		
SLO-2	CLO-2	SUB-CLO-6	Question and answer	0	10	0	0	10		
SLO-2	CLO-2	SUB-CLO-7	Question and answer	0	0	20	0	20		
SLO-3	CLO-5	SUB-CLO-8	Question and answer	5	0	0	0	5		
SLO-3	CLO-4	SUB-CLO-10	Question and answer	0	10	0	0	10		
SLO-3	CLO-3	SUB-CLO-11	Question and answer	5	0	0	0	5		
SLO-3	CLO-5	SUB-CLO-12	Question and answer	0	10	0	20	30		
				20	40	20	20	100		

Lampiran Rubrik 01 | ASSESMENT TERTULIS

Kriteria Penilaian	Bobot/Skor Penilaian				
	5	4	3	2	1/0
Konsep/ metode yang digunakan	Penjelasan konsep /metode (*) sangat lengkap dan akurat	Penjelasan konsep/metode (*) cukup jelas tetapi beberapa informasi tidak dituliskan secara lengkap.	Penjelasan konsep/metode (*) kurang jelas dan banyak informasi yang tidak dituliskan	Penjelasan yang dituliskan hampir tidak berkaitan dengan konsep/ metode (*)	Tidak memberikan konsep yang dibutuhkan
Sistematika penulisan/ pembuktian	Sistematika penulisan/ pembuktian sangat jelas dan terstruktur	Sistematika penulisan/ pembuktian cukup jelas namun ada langkah yang hilang	Sistematika penulisan/ pembuktian kurang jelas	Sistematika penulisan/ pembuktian tidak jelas	Jawaban tidak benar/ tidak ada
Interpretasi geometri/ kualitatif/ kuantitatif.	Interpretasi geometri/ kualitatif/ kuantitatif (*) tepat dan lengkap	Interpretasi geometri/ kualitatif/ kuantitatif (*) cukup lengkap/ tepat	Interpretasi geometri/ kualitatif/ kuantitatif (*) kurang lengkap/ tepat	Interpretasi geometri/ kualitatif/ kuantitatif (*) tidak lengkap/ tepat	Interpretasi geometri/ kualitatif/kuantitatif(*) tidak benar
Perhitungan/kesimpulan	Perhitungan/ kesimpulan sangat akurat/tepat dan disertai alasan yang mendasarinya	Perhitungan/ kesimpulan cukup akurat/tepat dan disertai alasan yang mendasarinya	Kesimpulan cukup tepat, namun tidak disertai alasan yang jelas	Perhitungan/ kesimpulan kurang akurat/tepat dan tidak disertai alasan yang mendasarinya	Perhitungan/kesimpulan salah

Lampiran Rubrik 02 | ASSESMENT PRESENTASI

Kriteria Penilaian	Bobot/Skor Penilaian				
	5	4	3	2	1
Penguasaan Materi	Mahasiswa sangat menguasai materi	Mahasiswa menguasai materi	Mahasiswa cukup menguasai materi	Mahasiswa kurang menguasai materi	Mahasiswa tidak menguasai materi
Sistematika Penyajian	Mahasiswa menyajikan materi presentasi dengan sangat sistematis	Mahasiswa menyajikan materi presentasi dengan sistematis	Mahasiswa menyajikan materi presentasi dengan cukup sistematis	Mahasiswa menyajikan materi presentasi dengan kurang sistematis	Mahasiswa menyajikan materi presentasi dengan tidak sistematis
Suara dan Ekspresi	Mahasiswa menjelaskan dengan suara yang sangat jelas, volume yang sangat sesuai, pengucapan istilah sangat tepat	Mahasiswa menjelaskan dengan suara yang jelas, volume yang sesuai, pengucapan istilah tepat	Mahasiswa menjelaskan dengan suara yang cukup jelas, volume yang cukup sesuai, pengucapan istilah cukup tepat	Mahasiswa menjelaskan dengan suara yang kurang jelas, volume yang kurang sesuai, pengucapan istilah kurang tepat	Mahasiswa menjelaskan dengan suara yang tidak jelas, volume yang tidak sesuai, pengucapan istilah tidak tepat
Kepercayaan Diri	Mahasiswa berbicara dengan sangat semangat, menularkan semangat dan antusiasme pada pendengar, eye contact ke semua peserta (audience)	Mahasiswa berbicara dengan semangat, menularkan semangat dan antusiasme pada pendengar, eye contact ke semua peserta (audience)	Mahasiswa berbicara dengan cukup semangat, cukup menularkan semangat dan antusiasme pada pendengar, eye contact ke semua peserta (audience)	Mahasiswa berbicara dengan kurang semangat, kurang menularkan semangat dan antusiasme pada pendengar, eye contact yang kurang ke semua peserta (audience)	Mahasiswa berbicara dengan tidak semangat, tidak dapat menularkan semangat dan antusiasme pada pendengar, tidak ada eye contact ke semua peserta (audience)
Kemampuan menjawab pertanyaan	Mahasiswa mampu menjawab semua pertanyaan dengan sangat tepat, sangat mendalam (lebih dari yang dibutuhkan), dan sangat tajam	Mahasiswa mampu menjawab semua pertanyaan dengan tepat, mendalam (lebih dari yang dibutuhkan), dan tajam	Mahasiswa mampu menjawab semua pertanyaan dengan cukup tepat, cukup mendalam, dan cukup tajam	Mahasiswa mampu menjawab semua pertanyaan dengan kurang tepat, kurang mendalam, dan kurang tajam	Mahasiswa mampu menjawab semua pertanyaan dengan tidak tepat, tidak mendalam, dan tidak tajam
Kepemimpinan (diskusi kelompok)	Mahasiswa sangat mampu menginisiasi, menggerakkan, mengarahkan, mengorganisir jalannya presentasi	Mahasiswa mampu menginisiasi, menggerakkan, mengarahkan, mengorganisir jalannya presentasi	Mahasiswa cukup mampu menginisiasi, menggerakkan, mengarahkan, mengorganisir jalannya presentasi	Mahasiswa kurang mampu menginisiasi, menggerakkan, mengarahkan, mengorganisir jalannya presentasi	Mahasiswa tidak mampu menginisiasi, menggerakkan, mengarahkan, mengorganisir jalannya presentasi

Lampiran Rubrik 04 | ASSESMENT DISKUSI

Kriteria Penilaian	Bobot/Skor Penilaian				
	5	4	3	2	1
Kelugasan argumen	Mahasiswa menyampaikan pendapat menggunakan bahasa yang sangat baik, sangat mudah dimengerti, intonasi suara yang sangat jelas	Mahasiswa menyampaikan pendapat menggunakan bahasa yang baik, mudah dimengerti, intonasi suara yang jelas	Mahasiswa menyampaikan pendapat menggunakan bahasa yang cukup baik, cukup mudah dimengerti, intonasi suara yang cukup jelas	Mahasiswa menyampaikan pendapat menggunakan bahasa yang kurang baik, kurang mudah dimengerti, intonasi suara yang kurang jelas	Mahasiswa menyampaikan pendapat menggunakan bahasa yang tidak baik, tidak mudah dimengerti, intonasi suara yang tidak jelas
Parsipitasi aktif	Mahasiswa sangat aktif menyampaikan pendapat/masukannya, sangat aktif memberi jawaban, dan sangat berinisiatif mencari solusi	Mahasiswa aktif menyampaikan pendapat/masukannya, aktif memberi jawaban, dan berinisiatif mencari solusi	Mahasiswa cukup aktif menyampaikan pendapat/masukannya, cukup aktif memberi jawaban, dan cukup berinisiatif mencari solusi	Mahasiswa kurang aktif menyampaikan pendapat/masukannya, kurang aktif memberi jawaban, dan kurang berinisiatif mencari solusi	Mahasiswa tidak aktif menyampaikan pendapat/masukannya, tidak aktif memberi jawaban, dan tidak berinisiatif mencari solusi
Etika dan sikap tata nilai	Mahasiswa sangat mengindahkan etika diskusi akademik secara umum	Mahasiswa mengindahkan etika diskusi akademik secara umum	Mahasiswa cukup mengindahkan etika diskusi akademik secara umum	Mahasiswa kurang mengindahkan etika diskusi akademik secara umum	Mahasiswa tidak mengindahkan etika diskusi akademik secara umum
Kepemimpinan (diskusi kelompok)	Mahasiswa sangat mampu menginisiasi, menggerakkan, mengarahkan, mengorganisir jalannya diskusi	Mahasiswa mampu menginisiasi, menggerakkan, mengarahkan, mengorganisir jalannya diskusi	Mahasiswa cukup mampu menginisiasi, menggerakkan, mengarahkan, mengorganisir jalannya diskusi	Mahasiswa kurang mampu menginisiasi, menggerakkan, mengarahkan, mengorganisir jalannya diskusi	Mahasiswa tidak mampu menginisiasi, menggerakkan, mengarahkan, mengorganisir jalannya diskusi