



Universitas Negeri Surabaya
Faculty of Mathematics and Natural Sciences
Bachelor of Mathematics Education Study Program

Document Code

SEMESTER LEARNING PLAN

Courses	CODE	Course Family	Credit Weight			SEMESTER	Compilation Date
School Mathematics	8420203111		T=3	P=0	ECTS=4.77	4	July 17, 2024
AUTHORIZATION		SP Developer		Course Cluster Coordinator		Study Program Coordinator	
			Dr. Endah Budi Rahaju, M.Pd.	
Learning model	Case Studies						
Program Learning Outcomes (PLO)	PLO study program which is charged to the course						
	Program Objectives (PO)						
	PLO-PO Matrix						
		P.O					
Short Course Description	This course examines the concepts of Mathematics in SMP/MTs, and essential SMA/MA Mathematics, student and/or teacher misconceptions along with learning alternatives that utilize ICT through reflective active learning with presentation media.						
References	Main :						
	<ol style="list-style-type: none"> 1. Sultan Alan, Artzt, Alice F. 2011. The Mathematics That Every Secondary School Math Teacher Need To Know . New York: Routledge 2. Van de Walle, John A. Karen S. Karp, Jennifer M. Bay-Williams. 2013. Elementary and Middle School Mathematics, Teaching Developmentally, Eight Edition . USA: Pearson Education 3. Sonnabend, Thomas. 2010. Mathematics for Teachers: An Interactive Approach for Grade K-8, Fourth Edition. USA: Brooks/Cole, USA: Brooks/Cole, Cengage Learning 4. Yee Lee Peng. 2006. Teaching Secondary School Mathematics, A Resource Book . Singapore : Mc Graw Hill 5. Buku-buku Matematika SMP/MTs yang relevan dengan kurikulum yang berlaku 6. Buku-buku Matematika SMA/MA yang relevan dengan kurikulum yang berlaku. 						
	Supporters:						
Supporting lecturer	Dr. Hj. Masriyah, M.Pd. Dr. Pradnyo Wijayanti, M.Pd. Dr. Siti Khabibah, M.Pd. Abdul Haris Rosyidi, S.Pd., M.Pd. Mukhtamilatus Sa'diyah, M.Pd.						
Week-	Final abilities of each learning stage (Sub-PO)	Evaluation		Help Learning, Learning methods, Student Assignments, [Estimated time]		Learning materials [References]	Assessment Weight (%)
		Indicator	Criteria & Form	Offline (offline)	Online (online)		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)

1	Understanding Integers, Power Numbers, Roots of a Number, Sequences and Series and Learning.	<ol style="list-style-type: none"> 1.Explaining Whole Numbers, Power Numbers, Roots of a Number, Sequences and Series and Learning. 2.Applying Integers, Ranked Numbers, Roots of a Number, Sequences and Series and Learning them in everyday life 	Criteria: Maximum score: 40	Learning with a Problem Solving Approach and involving the PMR 3 X 50 approach			0%
2	Understanding Fractions, Percents, Ratios and Comparisons, misconceptions and Learning	<ol style="list-style-type: none"> 1.Explaining the concepts of Fractions, Percents, Ratios and Comparisons, misconceptions and learning. 2.Applying the concepts of Fractions, Percents, Ratios and Comparisons and Learning them in everyday life. 	Criteria: Maximum score: 30	Learning with a Problem Solving Approach and involving the PMR 3 X 50 approach			0%
3	Understanding Logic, Sets and Learning	<ol style="list-style-type: none"> 1.Explaining the concept of Logic, Sets and Learning 2.Applying the concepts of Logic, Sets and Learning in everyday life 	Criteria: Max Score 20	Learning with a problem solving and posing approach involving the PMR 3 X 50 approach			0%
4	Understanding Linear and Quadratic Equations and Inequalities and Learning.	<ol style="list-style-type: none"> 1.Explaining the concept of Linear and Quadratic Equations and Inequalities and Learning. 2.Applying the concept of Linear and Quadratic Equations and Inequalities and Learning. 	Criteria: Max score 20	Learning with a problem solving and posing approach involving the PMR 3 X 50 approach			0%
5	Understanding Quadrilaterals and Triangles and Learning	<ol style="list-style-type: none"> 1.Explaining the concept of Quadrilaterals and Triangles and Learning. 2.Applying the concepts of Quadrilaterals and Triangles and Learning them in everyday life. 	Criteria: Max score 30	Learning with a Problem Solving Approach involving the PMR 3 X 50 approach			0%
6	Understanding Circles and Circle Equations and Learning	<ol style="list-style-type: none"> 1.Explaining the concept of Circles, and Circle Equations, and Learning 2.Applying the concept of circles, and circle equations, and learning in everyday life 	Criteria: Maximum score 40	Learning with a Problem Solving Approach involving the PMR 3 X 50 approach			0%

7	Understanding Matrices and Vectors and Learning	<ol style="list-style-type: none"> 1. Explaining the cardinality of Matrix and Vector concepts, and Learning. 2. Applying the cardinality of Matrix and Vector concepts, and learning them in everyday life. 	Criteria: Max 20	Learning with a problem solving and posing approach involving the PMR 3 X 50 approach			0%
8	UTS	Confluence indicators 1-7		3 X 50			0%
9	Understanding Building Flat Side Spaces and Learning..	<ol style="list-style-type: none"> 1.Explaining the concept of building flat-sided spaces and learning 2.Applying the concept of building a flat-sided space and learning it in everyday life. 	Criteria: Max score 30	Learning with a problem solving and posing approach involving the PMR 3 X 50 approach			0%
10	Understanding Curved Side Space Buildings and Learning	<ol style="list-style-type: none"> 1.Explaining the concept of building a curved side room and learning it 2.Applying the concept of building a curved sided space and learning it in everyday life 	Criteria: Max score 30	Learning with a problem solving and posing approach involving the PMR 3 X 50 approach			0%
11	Understanding Trigonometry and Learning	<ol style="list-style-type: none"> 1.Explaining the cardinality of Trigonometry concepts and learning. 2.Applying the cardinality of Trigonometry concepts and learning in everyday life. 	Criteria: Max score 40	Learning with a problem solving and posing approach involving the PMR 3 X 50 approach			0%
12	Understanding Logarithms and Learning	<ol style="list-style-type: none"> 1.Explaining the cardinality of the concept of logarithms and its learning. 2.Applying the cardinality concept of logarithms and learning it in everyday life. 	Criteria: Max 30	Learning with a problem solving and posing approach involving the PMR 3 X 50 approach			0%
13	Understanding Linear Programs and their learning	<ol style="list-style-type: none"> 1.Explain the concept of Linear Programming and Learning 2.Applying the concept of Linear Programming and Learning in everyday life 	Criteria: Max 20	Learning with a Problem Solving Approach involving the PMR 3 X 50 approach			0%

14	Understanding Limits of Functions, Differentials, and Integrals and learning them	<ul style="list-style-type: none"> Explaining the concept of Function Limits, Differentials, and Integrals and Learning. Applying the concepts of Function Limits, Differentials, and Integrals and learning them in everyday life 	Criteria: Max 30	Learning with a problem solving and posing approach involving the PMR 3 X 50 approach		0%
15	Statistics and Odds, and Learning to Understand Them	<ol style="list-style-type: none"> Explaining the cardinality of the concepts of Statistics and Probability, and Learning Applying the cardinality concepts of Statistics and Probability, and learning them in everyday life 	Criteria: Max score 20	Learning with a problem solving and posing approach involving the PMR 3 X 50 approach		0%
16	UAS			2 X 50		0%

Evaluation Percentage Recap: Case Study

No	Evaluation	Percentage
		0%

Notes

- Learning Outcomes of Study Program Graduates (PLO - Study Program)** are the abilities possessed by each Study Program graduate which are the internalization of attitudes, mastery of knowledge and skills according to the level of their study program obtained through the learning process.
- The PLO imposed on courses** are several learning outcomes of study program graduates (CPL-Study Program) which are used for the formation/development of a course consisting of aspects of attitude, general skills, special skills and knowledge.
- Program Objectives (PO)** are abilities that are specifically described from the PLO assigned to a course, and are specific to the study material or learning materials for that course.
- Subject Sub-PO (Sub-PO)** is a capability that is specifically described from the PO that can be measured or observed and is the final ability that is planned at each learning stage, and is specific to the learning material of the course.
- Indicators for assessing** ability in the process and student learning outcomes are specific and measurable statements that identify the ability or performance of student learning outcomes accompanied by evidence.
- Assessment Criteria** are benchmarks used as a measure or measure of learning achievement in assessments based on predetermined indicators. Assessment criteria are guidelines for assessors so that assessments are consistent and unbiased. Criteria can be quantitative or qualitative.
- Forms of assessment:** test and non-test.
- Forms of learning:** Lecture, Response, Tutorial, Seminar or equivalent, Practicum, Studio Practice, Workshop Practice, Field Practice, Research, Community Service and/or other equivalent forms of learning.
- Learning Methods:** Small Group Discussion, Role-Play & Simulation, Discovery Learning, Self-Directed Learning, Cooperative Learning, Collaborative Learning, Contextual Learning, Project Based Learning, and other equivalent methods.
- Learning materials** are details or descriptions of study materials which can be presented in the form of several main points and sub-topics.
- The assessment weight** is the percentage of assessment of each sub-PO achievement whose size is proportional to the level of difficulty of achieving that sub-PO, and the total is 100%.
- TM=Face to face, PT=Structured assignments, BM=Independent study.

