	Universitas Negeri Surabaya Faculty of Education, Basic Education Masters Study Program	Document Code

SEMESTER LEARNING PLAN

Courses	CODE	Course Family	Credit Weight			SEMESTER	Compilation Date
Axiomatic Mathematics	8612202631		T=2	P=0	ECTS=4.48	2	July 18, 2024

AUTHORIZATION	SP Developer	Course Cluster Coordinator	Study Program Coordinator
	.....	.....	Neni Mariana, S.Pd., M.Sc., Ph.D.

Learning model	**Case Studies**
Program Learning Outcomes (PLO)	**PLO study program that is charged to the course**
	Program Objectives (PO)
	PLO-PO Matrix

	P.O

PO Matrix at the end of each learning stage (Sub-PO)

P.O	Week														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

Short Course Description	This course discusses mathematical concepts taught in elementary school mathematics and mathematics in elementary school teacher education which are studied in an axiomatic deductive manner. Study materials in this course include: The Nature of Mathematics and School Mathematics, Problem Solving, Whole Numbers, Fractions, Algebra and Social Arithmetic, Linear Equations and Inequalities in One Variable, Number Patterns, Scales and Comparisons, Sets, Lines and Angles, Measurement and Geometry (Plane and Figure Figures), Functions and Equations of Straight Lines, Systems of Linear Equations in two Variables, Pythagorean Theorem, Quadratic Functions, Circles and Tangents to Circles, Statistics and Probability. The lecture approach is carried out using practical analytical case studies related to the main material through analysis of relevant recent journals. Lecture methods are dominated by discussions, simulations and presentations.
References	**Main :**

1. Hunacek, M. (2023). Introduction to Number Theory. CRC Press.
2. Gevay, G. (2017). An Axiomatic Approach to Geometry: Geometric Trilogy.
3. Koeno, G., Figueiredo, N., Feijs, E., Van Galen, F., Keijzer, R., & Munk, F. (2016). Measurement and geometry in upper primary school. Springer.
4. Owens, K. (2014). Visuospatial reasoning: An ecocultural perspective for space, geometry and measurement education(Vol. 111). Springer.
5. Musser, G. L., Peterson, B. E., & Burger, W. F. (2013). Mathematics for elementary teachers: A contemporary approach. John Wiley & Sons.
6. Arcavi, A., Drijvers, P., & Stacey, K. (2016). The learning and teaching of algebra: Ideas, insights and activities. Routledge.

	Supporters:
Supporting lecturer	Dr. Wiryanto, M.Si.

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							0%
2							0%
3							0%
4							0%
5							0%
6							0%
7							0%
8							0%
9							0%
10							0%
11							0%
12							0%
13							0%
14							0%
15							0%
16							0%

Evaluation Percentage Recap: Case Study

No	Evaluation	Percentage
		0%

Notes

1. **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.
2. **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.
3. **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.
4. **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.
5. **Indicators for assessing** abilities in the process and student learning outcomes are specific and measurable statements that identify the abilities or performance of student learning outcomes accompanied by evidence.
6. **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.
7. **Forms of assessment:** test and non-test.

8. **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.
9. **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.
10. **Learning materials** are details or descriptions of study materials which can be presented in the form of several main points and sub-topics.
11. **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%.
12. TM=Face to face, PT=Structured assignments, BM=Independent study.