COURSE PLAN

LEARNING MATHEMATICS IN ELEMENTARY SCHOOL

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DEPARTMENT OF PRIMARY EDUCATION | UNIVERSITAS PGRI MADIUN

COURSE PLAN

Course Name:
Learning mathematics in elementary school

DEPARTMENT OF PRIMARY EDUCATION
FACULTY OF TEACHER TRAINING AND EDUCATION
UNIVERSITAS PGRI MADIUN
2022

Document	**:**	**Course plan**
Course name	**:**	**Learning mathematics in elementary school**
Credit	**:**	**2**
Course Counselor Team Coordinator	**:**	**-**
Course Cluster Coordinator	**:**	**-**
Team Teaching	**:**	**-**

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TABLE OF CONTENTS

	COURSE PLAN **DEPARTMENT OF PRIMARY EDUCATION** **FACULTY OF TEACHER TRAINING AND EDUCATION** **UNIVERSITAS PGRI MADIUN**				
COURSE NAME	**COURSE CODE**	**COURSE CLUSTER**	**CREDIT**	**SEMESTER**	**DATE**
Learning mathematics in elementary school	PSD- 2007	Mathematics	2	4	February 01, 2022

Learning Outcomes (LO)	**Course Plan Development Coordinator**	**Cluster Coordinator**	**Head of the study program**
	Lingga Nico Pradana, M.Pd.	-	

Course Learning Outcome	
M1	Approaching mathematics content on elementary education
M2	Change mathematics content to the pedagogical content knowledge
M3	Create mathematics content in for teaching
M4	Create and present mathematical problem
M5	Explain how to solve mathematical problem in mathematics learning
SUB- Course Learning Outcome	
L1	Able to make an approach to mathematics content
L2	Able to change mathematics content in to the pedagogical content knowledge
L3	Able to make teaching idea and plan for whole number (addition, subtraction, multiplication, & division)
L4	Able to make teaching idea and plan for 2D shape and angle
L5	Able to make teaching idea and plan for fraction, LCM, and HCF
L6	Able to make teaching idea and plan for 3D Shape and fraction (addition and subtraction)
L7	Able to make teaching idea and plan for integer and mixed operation (PEMDAS & BODMAS)
L8	Presenting mathematical problems
L9	Solving mathematical problems
L10	Present and solve whole number problems
L11	Present and solve angle and 2D shape problems
L12	Present and solve fraction, LCM, and HCM problems
L13	Present and solve 3D Shape and fraction (addition and subtraction) problems

	L14	Present and solve integer and mixed operation (PEMDAS & BODMAS) problems
Course description	**DESCRIPTION**	
	examines mathematics content and problems. Transform mathematics content into pedagogical content. presents ideas in conveying mathematical concepts. Students make mathematical problems and present ways of solving mathematical problems.	
Learning Material	**Study Material**	
	Pedagogical mathematics content knowledge and mathematical problem for mathematics learning in elementary education	
	Discussion Topics	
	Discuss about whole number, fraction, 2D-3D shape and their properties, LCM-HCM, integer, and mixed operation.	
References	**Primary**	
	P1. National curriculum of elementary school P2. Isoda, M., & Katagiri, S. (2012). *Mathematical thinking*. World Scientific. P3. Walle, J. Van de, Karp, K. S., & Bay-Williams, J. M. (2010). Elementary and middle school mathematics: teaching developmentally (7th ed.). Pearson Education, Inc.	
	Secondary	
	S1. Buschman, L. (2003). Children who enjoy problem solving. *Teaching Children Mathematics*, *9*(9), 539–544. S2. Cramer, K., & Henry, A. (2002). Using manipulative models to build number sense for addition of fractions. In B. Litwiller (Ed.), *Making sense of fractions, ratios, and proportions* (pp. 41–48). Reston, VA: NCTM. S3. Fosnot, C. T., & Dolk, M. (2001). *Young mathematicians at work: Constructing number sense, addition, and subtraction*. Portsmouth, NH: Heinemann. S4. Ineson, G. (2007). Year 6 children: Has the new British mathematics curriculum helped their mental calculation? *Early Child Development and Care*, *177*(5), 541–555. S5. Renne, C. G. (2004). Is a rectangle a square? Developing mathematical vocabulary and conceptual understanding. *Teaching Children Mathematics*, *10*(5), 258–263.	
Learning Media	**Sofware**	**Hardware**

	Geogebra; Visio; eLMA; Action	Laptop
Teacher/Team Teaching/ Tim LS	-	
Assessment	Authentic Assessment	
Past Course requirement	Basic concepts of mathematics Geometry	

Meeting	Learning Outcome	Indicators of Competence Achievement	Subject matter	Methods	Student Learning Experience	Estimated time	Assessment			Reference
							Forms & Criteria	Assessment Indicators	Credit (%)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1	M1	L1	mathematics content approach	synchronous	direct discussion	100 min	observation	activity submission	5	P1 P2
2	M2	L2	pedagogical content knowledge	synchronous	direct discussion	100 min	observation	activity submission	5	P2
3	M3	L3	whole number	synchronous	examine mathematics content into pedagogical content	100 min & 1 periode on eLMA	Submission	submission paper & presentation	8	P1 S2 S3
4	M3	L4	2D shape and angle	synchronous	examine mathematics content into pedagogical content	100 min & 1 periode on eLMA	submission	submission paper & presentation	8	P1
5	M3	L5	fraction, LCM, and HCF	synchronous	examine mathematics content into pedagogical content	100 min & 1 periode on eLMA	submission	submission paper & presentation	8	P1 S2
6	M3	L6	3D Shape and fraction	synchronous	examine mathematics content into	100 min & 1 periode on eLMA	submission	submission paper & presentation	8	P1 S2

Meeting	Learning Outcome	Indicators of Competence Achievement	Subject matter	Methods	Student Learning Experience	Estimated time	Assessment			Reference
							Forms & Criteria	Assessment Indicators	Credit (%)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
					pedagogical content					
7	M3	L7	integer and mixed operation	synchronous	examine mathematics content into pedagogical content	100 min & 1 periode on eLMA	submission	submission paper & presentation	8	P1 S2 S3
8	**MID EXAM**									
9	M4	L8	presenting matematical problems	synchronous	direct discussion	100 min	observation	activity submission	5	P2 S1
10	M5	L9	Solving mathematical problems	synchronous	direct discussion	100 min	observation	activity submission	5	P2 S1 S4
11	M4 & M5	L10	whole number problems	synchronous	create mathematical problems	100 min & 1 periode on eLMA	submission	submission paper & presentation	8	P2 S1
12	M4 & M5	L11	angle and 2D shape problems	synchronous	create mathematical problems	100 min & 1 periode on eLMA	submission	submission paper & presentation	8	P2 S1 S5
13	M4 & M5	L12	fraction, LCM, and HCM problems	synchronous	create mathematical problems	100 min & 1 periode on eLMA	submission	submission paper & presentation	8	P2 S1
14	M4 & M5	L13	3D Shape and fraction (addition and subtraction) problems	synchronous	create mathematical problems	100 min & 1 periode on eLMA	submission	submission paper & presentation	8	P2 S1
15	M4 & M5	L14	integer and mixed operation problems	synchronous	create mathematical problems	100 min & 1 periode on eLMA	submission	submission paper & presentation	8	P2 S1
16	**FINAL EXAM**									