



**Universitas Negeri Surabaya**  
**Faculty of Education,**  
**Special Education Undergraduate Study Program**

Document Code

**SEMESTER LEARNING PLAN**

<b>Courses</b>	<b>CODE</b>	<b>Course Family</b>	<b>Credit Weight</b>			<b>SEMESTER</b>	<b>Compilation Date</b>
Mathematics Learning for Children with Special Needs	8620202187		T=2	P=0	ECTS=3.18	5	July 18, 2024
<b>AUTHORIZATION</b>	<b>SP Developer</b>		<b>Course Cluster Coordinator</b>			<b>Study Program Coordinator</b>	
	.....		.....			Dr. H. Pamuji, M.Kes.	
<b>Learning model</b>	Project Based Learning						
<b>Program Learning Outcomes (PLO)</b>	PLO study program that is charged to the course						
	Program Objectives (PO)						
	PLO-PO Matrix						
		P.O					
<b>Short Course Description</b>	This course examines the nature of mathematics learning for ABK, basic concepts of mathematics, implementation of science learning for ABK in special and inclusion classes. The discussion also includes providing understanding and knowledge, as well as experience, skills to students through theories, concepts, the nature of mathematics, objectives, functions and benefits for obtaining skills in the cognitive, affective and psychomotor development of ABK in participating in mathematics learning programs for ABK both in class. special and in inclusion classes. Implementation of strategies, delivery techniques and assessment of mathematics learning for children with special needs to plan, apply, modify, analyze, evaluate and complete mathematics education for children with special needs and equip students to be able to make decisions in applying mathematics learning for children with special needs to find alternative solutions in solving problems the field of mathematics learning for children with special needs. At the end of the course students are able to utilize science and technology to design digital-based mathematics learning media for children with special needs.						
	<b>References</b>	<b>Main :</b> 1. Arends, Richard I. 2012. <i>Learning To Teach sixth Edition</i> . New York: McGraw-Hill Book Company. Vaughn, Sharon., Bos, Candace S., Schumm, Jeanne Shay. 2000. <i>Teaching Exceptional, Diverse, and at-Risk Student in The General Education Classroom</i> . United State of America: A Pearson Education Company Karim, Muhtar A, dkk. 1996. <i>Pendidikan Matematika</i> . Jakarta: Depdiknas Kennedy, L.M. Tapp, S. 1994. <i>Guiding Children's Learning of Mathematics</i> cs (7th Edition). California: Wodsworth Publishing Company Billstein, Rick., Libeskind, Shlomo., dan Lott, W. Johnny, 1993. <i>A Problem Solving Approach to Mathematics for Elementary School Teachers (5th Ed)</i> , Massachusetts : Addison-Wesley Publishing Company, Inc. Troutman, Andrea P. dan Lichtenberg, Betty K . 1991. <i>Mathematics A Good Beginning Strategies for Teaching Children (4th Ed)</i> , California: Brooks/Cole Publishing Company. Hudoyo, H. dan Sutawidjaya, A. 1997. <i>Matematika</i> . Jakarta: Depdikbud, Dirjen Dikti. Maulana .2008. <i>Dasar-dasar Keilmuan Matematika</i> . Subang: Royyan Press. Sukirman, dkk.2005. <i>Matematika</i> . Jakarta: Universitas Terbuka. Wheeler, Ruric E. 1992. <i>Modern Mathematics</i> . Belmont, CA: Wadsworth. Tussy,Alan S, Gustafson,David, Koenig,Diane R.2011. <i>Basic Mathematics for College Students</i> . Canada: Nelson Education,Ltd. Taton, James Stuart.2005. <i>Encyclopedia of Mathematics</i> .New York: Facts on File,Inc. Jarrett,Denise.1999. <i>Mathematics and Science Instruction for Students with learning disabilities</i> .Northwest Regional Educational Laboratory  <b>Supporters:</b>					
<b>Supporting lecturer</b>	Dr. Asri Wijastuti, M.Pd.						
<b>Week-</b>	<b>Final abilities of each learning stage (Sub-PO)</b>	<b>Evaluation</b>		<b>Help Learning, Learning methods, Student Assignments, [ Estimated time]</b>		<b>Learning materials [ REFERENCES ]</b>	<b>Assesment Weight (%)</b>
		<b>Indicator</b>	<b>Criteria &amp; Form</b>	<b>Offline ( offline )</b>	<b>Online ( online )</b>		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)

1	Understand competencies, descriptions, sequence of mathematics learning course material for ABK and lecture contracts	1. Mention the competencies, description, sequence of mathematics learning course material for ABK	<b>Criteria:</b> 1.4: mention and explain the 4 CPs correctly 2.3: just mention and explain correctly the 3 CPs 3.2: name and explain correctly 2 CP 4.1: mention and explain 1 CP 5.0: did not answer	expository discussion 2 X 50			0%
2							0%
3	Understanding the nature of mathematics for ABK. Understanding the scope of mathematics learning for ABK	1. Describe the nature of mathematics for ABK 2. Describes the scope of mathematics learning for ABK	<b>Criteria:</b> 1.4: the writing is close to the same or 300 words, and describes the nature of mathematics and the scope of mathematics education correctly. 2.3: the writing is generally correct, only one aspect is incorrectly explained 3.2: the writing only contains two correct aspects. 4.1: writing in general does not answer commands.	scientific collaborative inquiry 2 X 50			0%
4	Identifying beginning algebra learning strategies for ATR	Shows the characteristics of beginning algebra learning for ATR	<b>Criteria:</b> 1.4: correct content and placement; 2.3: the content is correct, there is a placement error, OR the content is incorrectly placed 3.2: partially correct content, and partially correct placement 4.1: partially correct and incorrect placement OR correct placement and incorrect content.	scientific inquiry 2 X 50			0%
5	Describe mathematics learning strategies for children with intellectual disabilities	Formulate a strategy for learning addition and subtraction arithmetic operations for children with intellectual disabilities	<b>Criteria:</b> 1.4: correct content, coherent/coherent, maximum length 150 words. 2.3: correct content, not coherent/coherent, maximum 150 words, 3.2: partially incorrect content, not coherent/coherent, less than 100 words long, 4.1: wrong content	recitation direct instruction 2 X 50			0%
6	Describe the principles of mathematics learning for children with autism	Demonstrates the principles of learning to number for children with autism	<b>Criteria:</b> 1.4: mention completely and explain correctly 2.3: call incomplete and explain correctly 3.2: mention some and explain correctly 4.1: mention some and explain wrong	scientific discovery 2 X 50			0%

7	Describe mathematics learning strategies for children with special needs	<ol style="list-style-type: none"> <li>1. Develop a mathematics learning strategy chart for children with special needs</li> <li>2. Presenting a mathematics learning strategy chart for ABK</li> </ol>	<b>Criteria:</b> 1.4: complete and correct content and attractive appearance 2.3: the content is complete and correct, the appearance is not attractive OR the appearance is attractive but there are inaccuracies in the content 3.2: the content is partly correct, the appearance is attractive 4.1: the content is incorrect and the appearance is not attractive	Scientific collaborative 2 X 50			0%
8	Meeting competencies 1-7		<b>Criteria:</b> Each question has a maximum of 10 if the indicators written are correct	written test 2 X 50			0%
9	Analyzing elementary school mathematics books about the nature of mathematics as procedural knowledge, flexible procedural and conceptual knowledge Making an analysis of the SLB mathematics curriculum and inclusion	<ol style="list-style-type: none"> <li>1. Explains the nature of mathematics as procedural knowledge, procedural flexibility, and conceptual knowledge</li> <li>2. Differentiating the mathematics curriculum in inclusion and SLB</li> </ol>	<b>Criteria:</b> 1.4: mention 2 fields and explain them correctly. 2.3: mention 2 fields, and explain what is wrong. 3.2: mentions 2 fields, explains everything wrong 4.1: call wrong and explain wrong	scientific discussion 2 X 50			0%
10	Applying the basics and principles of a differentiated curriculum	<ol style="list-style-type: none"> <li>1. Developing differentiated mathematics learning plans in inclusion classes</li> <li>2. Analyzing procedural knowledge, procedural flexibility, and conceptual knowledge of differentiated mathematics learning in inclusion classes</li> </ol>	<b>Criteria:</b> 1.4: correct according to theoretical and empirical, 2.3: theoretically correct, empirically partly incorrect; OR theoretical is partially wrong, empirical is correct, 3.2: theoretical is partly wrong, and empirical is partly wrong 4.1: theoretical is wrong, empirical is wrong	scientific collaborative multi learning 2 X 50			0%
11	Constructing a geometry learning concept for ABK	<ol style="list-style-type: none"> <li>1. Explaining geometric concepts through e-learning</li> <li>2. Analyzing the effectiveness of learning mathematics geometry for ABK</li> </ol>	<b>Criteria:</b> 1.4: contents are complete and correct, coherent/coherent 2.3: the content is incomplete, the explanation is correct, not coherent/coherent 3.2: the content is incomplete, the explanation is partly incorrect, not coherent/coherent 4.1: content, explanation, sequence is wrong	scientific discussion 2 X 50			0%

12	Implementing mathematics learning strategies for gifted children in inclusion classes	1.Describe arithmetic learning strategies for gifted children in inclusion classes 2.Analyzing the management of the mathematics learning environment for gifted children	<b>Criteria:</b> 1.4: contents are complete and correct, coherent/coherent 2.3: the content is incomplete, the explanation is correct, not coherent/coherent 3.2: the content is incomplete, the explanation is partly incorrect, not coherent/coherent 4.1: content, explanation, sequence is wrong	Scientific collaborative virtual learning 2 X 50			0%
13	Implementing geometric technology assistance for children with special needs in inclusion classes	1.Explain the basics of mathematics learning technology assistance for ABK 2.Analyzing key components of mathematics learning technology assistance for ABK	<b>Criteria:</b> 1.4: contents are complete and correct, coherent/coherent 2.3: the content is incomplete, the explanation is correct, not coherent/coherent 3.2: the content is incomplete, the explanation is partly incorrect, not coherent/coherent 4.1: content, explanation, sequence is wrong	scientificdiscussioninquiry 2 X 50			0%
14	Applying strategies for differentiation of material content and mathematical processes for gifted children in inclusion classes	1.Explain the basics of differentiation of material content and process 2.Analyzing key components of the gifted mathematics curriculum	<b>Criteria:</b> 1.4: contents are complete and correct, coherent/coherent 2.3: the content is incomplete, the explanation is correct, not coherent/coherent 3.2: the content is incomplete, the explanation is partly incorrect, not coherent/coherent 4.1: content, explanation, sequence is wrong	scientifichumanisticdiscussion 2 X 50			0%
15	Designing a simple number line tool for children with special needs Making simple abacus media from used materials Preparing a K13 based mathematics learning plan for ABK in Inclusion Classes	1. Demonstrating tools and media in learning mathematics: addition and subtraction arithmetic operations, 2.Developing a K 13 based mathematics learning plan for ABK	<b>Criteria:</b> 1.4: complete and correct content and attractive appearance 2.3: the content is complete and correct, the appearance is not attractive OR the appearance is attractive but there are inaccuracies in the content 3.2: the content is partly correct, the appearance is attractive 4.1: the content is incorrect and the appearance is not attractive	scientifichumanisticdiscovery 2 X 50			0%
16							0%

**Evaluation Percentage Recap: Project Based Learning**

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** 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.
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.