



**LEARNING PLAN SEMESTER  
MATHEMATICS DEPARTMENT  
FACULTY OF MATHEMATICS AND NATURAL SCIENCES**

<b>Course Name</b>	<b>: Evaluation of Mathematics Learning</b>	<b>Semester :</b> V	<b>Workload :</b> 3 SKS	<b>Code Course : MAT1.61.5302</b>
<b>Programme Study</b>	<b>: Mathematics Education</b>	<b>Lecturer:</b>  <b>Lecturer Team</b>		
<b>Faculty</b>	<b>: Mathematics and Natural Sciences</b>			
<b>Programme Learning Outcomes (PLO)</b>				
<b>PLO 2</b>	<b>: Able to design innovative learning based on the concept of mathematics education and learning</b>			
<b>PLO 6</b>	<b>: Able to produce innovative work, in the fields of education and entrepreneurship</b>			
<b>PLO 10</b>	<b>: Able to show a responsible attitude in their own work and can be given responsibility for the achievement of group works</b>			
<b>Course Learning Outcomes (CO)</b>				
<b>CO 1</b>	<b>: Able to identify terms related to assessments in mathematics learning</b>			
<b>CO 2</b>	<b>: Able to explain and distinguish between Bloom, Cangelosi, and Marzano taxonomy and can formulate learning indicators and objectives based on the taxonomy</b>			
<b>CO 3</b>	<b>: Able to distinguish between test and non-test instruments and can design test and non-test instruments based on the taxonomy of Bloom, Cangelosi, and Marzano</b>			
<b>CO 4</b>	<b>: Able to explain and analyse the quality of instruments (valid, reliable, differentiating power and difficulty levels) tests and non-tests</b>			
<b>CO 5</b>	<b>: Able to explain and distinguish the students' mathematical abilities</b>			
<b>CO 6</b>	<b>: Able to design instruments related to students' mathematical abilities and its scoring rubrics.</b>			
<b>CO 7</b>	<b>: Able to explain and design instruments of authentic assessment, attitudes and skills.</b>			
<b>CO 8</b>	<b>: Showing responsibility attitude towards works by self and by team works.</b>			

**Learning Matriks**

Week	Sub CO (achievement ability after learning phase)	Reference	Assessment		Form of Learning, Method, Assignment		Score Percentage
			Criteria and Indicator	Form	Lecture	Online	
1 2	Able to identify terms related to assessments in mathematics learning, such as function, objectives and procedure in evaluation (Sub CO 1)  Able to show responsibility attitude toward team works (Sub CO 8)	<b>Topic :</b> Function, objective and Procedure of Evaluation  <b>Reference:</b> [1] - [7]	<b>Qualitative :</b> Ability to understand and explain the concept by oral and written communication  <b>Quantitative:</b> Ability to communicate the concept by written form via paper.	Paper	<b>Form:</b> Lecture  <b>Method:</b> Expository and Group Discussion  <b>Assignments:</b> Group Paper	<b>Form:</b> Online <b>Method:</b> Synchronise or Asynchronies of Expository and Group Discussion (via Zoom, Google Meet, e-learning) <b>Assignment:</b> Paper	4%

3 4 5	<p>Able to explain and distinguish between Bloom, Cangelosi, and Marzano taxonomy (Sub CO 2)</p> <p>Able to formulate learning indicators and objectives based on the taxonomy (Sub CO 2)</p> <p>Able to show responsibility attitude toward team works (Sub CO 8)</p>	<p><b>Topic :</b> Bloom, Cangelosi and Marzano Taxonomy</p> <p><b>Reference:</b> [1] - [7]</p>	<p><b>Qualitative :</b> Ability to explain and formulate the objective of concept by oral and written communication</p> <p><b>Quantitative:</b> Ability to communicate the concept by written form via paper.</p>	Paper	<p><b>Form:</b> Lecture</p> <p><b>Method:</b> Expository and Group Discussion</p> <p><b>Assignments:</b> Group Paper</p>	<p><b>Form:</b> Online</p> <p><b>Method:</b> Synchronise or Asynchronies of Expository and Group Discussion (via Zoom, Google Meet, e-learning)</p> <p><b>Assignment:</b> Paper</p>	6%
6	<p>Able to explain the variety of instruments test (Sub CO 4)</p> <p>Able to distinguish and design instruments test based on the taxonomy (Sub CO 3)</p> <p>Able to show responsibility attitude toward team works (Sub CO 8)</p>	<p><b>Topic :</b> Test Instruments</p> <p><b>Reference:</b> [1] - [7]</p>	<p><b>Qualitative :</b> Ability to understand and design the objective of concept by oral and written communication</p> <p><b>Quantitative:</b> Ability to communicate the concept by written form via paper.</p>	Paper	<p><b>Form:</b> Lecture</p> <p><b>Method:</b> Expository and Group Discussion</p> <p><b>Assignments:</b> Group Paper</p>	<p><b>Form:</b> Online</p> <p><b>Method:</b> Synchronise or Asynchronies of Expository and Group Discussion (via Zoom, Google Meet, e-learning)</p> <p><b>Assignment:</b> Paper</p>	2%
7	<p>Able to analyse the quality of instruments test (valid, reliable, differentiating power and difficulty levels) (Sub CO 4)</p> <p>Able to show responsibility attitude toward team works (Sub CO 8)</p>	<p><b>Topic :</b> Quality of Instruments Test</p> <p><b>Reference:</b> [1] - [3]</p>	<p><b>Qualitative :</b> Ability to understand and analyze the concept by oral and written communication</p> <p><b>Quantitative:</b> Ability to communicate the concept by written form via paper.</p>	Paper	<p><b>Form:</b> Lecture</p> <p><b>Method:</b> Expository and Group Discussion</p> <p><b>Assignments:</b> Group Paper</p>	<p><b>Form:</b> Online</p> <p><b>Method:</b> Synchronise or Asynchronies of Expository and Group Discussion (via Zoom, Google Meet, e-learning)</p> <p><b>Assignment:</b> Paper</p>	2%
8	<p>Able to explain the variety of non-test instruments (Sub CO 4)</p> <p>Able to distinguish and design instruments non-test based on the taxonomy (Sub CO 3)</p> <p>Able to show responsibility attitude toward team works (Sub CO 8)</p>	<p><b>Topic :</b> Variety of Non-Test Instruments</p> <p><b>Reference:</b> [1] - [7]</p>	<p><b>Qualitative :</b> Ability to understand and design the objective of concept by oral and written communication</p> <p><b>Quantitative:</b> Ability to communicate the concept by written form via paper.</p>	Paper	<p><b>Form:</b> Lecture</p> <p><b>Method:</b> Expository and Group Discussion</p> <p><b>Assignments:</b> Group Paper</p>	<p><b>Form:</b> Online</p> <p><b>Method:</b> Synchronise or Asynchronies of Expository and Group Discussion (via Zoom, Google Meet, e-learning)</p> <p><b>Assignment:</b> Paper</p>	2%

9	<p>Able to analyse the quality of non-test instruments (valid, reliable, differentiating power and difficulty levels) (Sub CO 4)</p> <p>Able to show responsibility attitude toward team works (Sub CO 8)</p>	<p><b>Topic :</b> Quality of Non-Test Instruments</p> <p><b>Reference:</b> [1] - [7]</p>	<p><b>Qualitative :</b> Ability to understand and analyze the concept by oral and written communication</p> <p><b>Quantitative:</b> Ability to communicate the concept by written form via paper.</p>	Paper	<p><b>Form:</b> Lecture</p> <p><b>Method:</b> Expository and Group Discussion</p> <p><b>Assignments:</b> Group Paper</p>	<p><b>Form:</b> Online</p> <p><b>Method:</b> Synchronise or Asynchronies of Expository and Group Discussion (via Zoom, Google Meet, e-learning)</p> <p><b>Assignment:</b> Paper</p>	2%
10	<b>MID-TERM SEMESTER EXAM</b>						35%
11	<p>Able to explain and distinguish the students' reasoning and communication mathematical abilities (Sub CO 5)</p> <p>Able to design instruments related to students' reasoning and communication mathematical abilities and its scoring rubrics. (Sub CO 6)</p> <p>Able to show responsibility attitude toward team works (Sub CO 8)</p>	<p><b>Topic :</b> Reasoning and Communication Mathematical Ability</p> <p><b>Reference:</b> [1] - [7]</p>	<p><b>Qualitative :</b> Ability to understand and design the objective of concept by oral and written communication</p> <p><b>Quantitative:</b> Ability to communicate the concept by written form via paper.</p>	Paper	<p><b>Form:</b> Lecture</p> <p><b>Method:</b> Expository and Group Discussion</p> <p><b>Assignments:</b> Group Paper</p>	<p><b>Form:</b> Online</p> <p><b>Method:</b> Synchronise or Asynchronies of Expository and Group Discussion (via Zoom, Google Meet, e-learning)</p> <p><b>Assignment:</b> Paper</p>	2%
12	<p>Able to explain and distinguish the students' representation and connection mathematical abilities (Sub CO 5)</p> <p>Able to design instruments related to students' representation and connection mathematical abilities and its scoring rubrics. (Sub CO 6)</p> <p>Able to show responsibility attitude toward team works (Sub CO 8)</p>	<p><b>Topic :</b> Representation and Connection Mathematical Abilities</p> <p><b>Reference:</b> [1] - [7]</p>	<p><b>Qualitative :</b> Ability to understand and design the objective of concept by oral and written communication</p> <p><b>Quantitative:</b> Ability to communicate the concept by written form via paper.</p>	Paper	<p><b>Form:</b> Lecture</p> <p><b>Method:</b> Expository and Group Discussion</p> <p><b>Assignments:</b> Group Paper</p>	<p><b>Form:</b> Online</p> <p><b>Method:</b> Synchronise or Asynchronies of Expository and Group Discussion (via Zoom, Google Meet, e-learning)</p> <p><b>Assignment:</b> Paper</p>	2%
13	<p>Able to explain and distinguish the students' mathematical problem solving abilities (Sub CO 5)</p> <p>Able to design instruments related to</p>	<p><b>Topic :</b> Mathematical Problem Solving Ability</p> <p><b>Reference:</b> [1] - [7]</p>	<p><b>Qualitative :</b> Ability to understand and design the objective of concept by oral and written communication</p> <p><b>Quantitative:</b> Ability to communicate the concept by written form via paper.</p>	Paper	<p><b>Form:</b> Lecture</p> <p><b>Method:</b> Expository and Group Discussion</p>	<p><b>Form:</b> Online</p> <p><b>Method:</b> Synchronise or Asynchronies of Expository and Group Discussion (via Zoom, Google Meet, e-</p>	2%

	students' mathematical problem solving abilities and its scoring rubrics. (Sub CO 6)  Able to show responsibility attitude toward team works (Sub CO 8)				<b>Assignments:</b> Group Paper	learning) <b>Assignment:</b> Paper	
14	Able to explain and design instruments of authentic assessment, such as performance assessment, observation and questioning (Sub CO 7)  Able to show responsibility attitude toward team works (Sub CO 8)	<b>Topic :</b> Authentic Assessment : Performance assessment, Observation and Questioning  <b>Reference:</b> [1] - [9]	<b>Qualitative :</b> Ability to understand and design the objective of concept by oral and written communication  <b>Quantitative:</b> Ability to communicate the concept by written form via paper.	Paper	<b>Form:</b> Lecture  <b>Method:</b> Expository and Group Discussion  <b>Assignments:</b> Group Paper	<b>Form:</b> Online <b>Method:</b> Synchronise or Asynchronies of Expository and Group Discussion (via Zoom, Google Meet, e-learning) <b>Assignment:</b> Paper	2%
15	Able to explain and design instruments of authentic assessment, such as presentation & discussion, project and investigation (Sub CO 7)  Able to show responsibility attitude toward team works (Sub CO 8)	<b>Topic :</b> Authentic Assessment : Presentation & Discussion, Project, and Investigation  <b>Reference:</b> [1] - [9]	<b>Qualitative :</b> Ability to understand and design the objective of concept by oral and written communication  <b>Quantitative:</b> Ability to communicate the concept by written form via paper.	Paper	<b>Form:</b> Lecture  <b>Method:</b> Expository and Group Discussion  <b>Assignments:</b> Group Paper	<b>Form:</b> Online <b>Method:</b> Synchronise or Asynchronies of Expository and Group Discussion (via Zoom, Google Meet, e-learning) <b>Assignment:</b> Paper	2%
16	Able to explain and design instruments of authentic assessment, such as journal and portfolio (Sub CO 7)  Able to show responsibility attitude toward team works (Sub CO 8)	<b>Topic :</b> Authentic Assessment: Journal and Portfolio  <b>Reference:</b> [1] - [9]	<b>Qualitative :</b> Ability to understand and design the objective of concept by oral and written communication  <b>Quantitative:</b> Ability to communicate the concept by written form via paper.	Paper	<b>Form:</b> Lecture  <b>Method:</b> Expository and Group Discussion  <b>Assignments:</b> Group Paper	<b>Form:</b> Online <b>Method:</b> Synchronise or Asynchronies of Expository and Group Discussion (via Zoom, Google Meet, e-learning) <b>Assignment:</b> Paper	2%
<b>FINAL SEMESTER EXAM</b>							35%

**Reference :**

1. Anderson, Lorin W & Krathwohl, David R. (2002). **A Taxonomy for Learning, Teaching, and Assessing. A Revision of Bloom's Taxonomy of Educational Objectives.** Longman: New York
2. Angelo, Thomas A & Cross, K Patricia .(1993). **Classroom Assessment Techniques.** Jossey-Bass Publisher: San Francisco
3. Arikunto, Suharsimi. (2005). **Dasar-dasar Evaluasi Pendidikan.**P.T. Bina Akasar: Jakarta
4. Cangelosi, James S. (1990). **Merancang Tes Untuk Menilai Prestasi Siswa.** ITB: Bandung
5. Depdiknas. (2003) **Pengembangan Sistem Penilaian.** Depdiknas: Jakarta
6. Marzano, R. J. (2000). **Designing a new taxonomy of educational objectives.** Thousand Oaks, CA: Corwin Press. Paris, S.G.
7. Mc Milan, James H. (1997). **Classroom Assessment: Principles and Practice for Effective Instruction.** Allyn and Bacon: Boston
8. Ott, Jack. (1994). **Alternative Assessment.** Teacher Created Materials, Inc: USA
9. Ryan, Concetta D. (1994). **Authentic Assessment.** Teacher Created Materials, Inc: USA