UNESA	**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
Evaluation of Learning and Learning	8420202004	Compulsory Study Program Subjects	**T=2**	**P=0**	**ECTS=3.18**	3	July 17, 2024

AUTHORIZATION	SP Developer	Course Cluster Coordinator	Study Program Coordinator
	TIM	.....	Dr. Endah Budi Rahaju, M.Pd.

Learning model	**Case Studies**	
Program Learning Outcomes (PLO)	**PLO study program which is charged to the course**	
	PLO-8	Designing, implementing and evaluating mathematics learning using IT
	PLO-10	Make decisions based on data/information in completing assignments that are the student's responsibility and evaluate the work that has been done
	PLO-13	Demonstrate pedagogical knowledge in designing, implementing and evaluating mathematics learning.
	Program Objectives (PO)	
	PO - 1	Able to demonstrate a critical and innovative attitude in designing mathematics learning assessments according to the demands of the 21st century [S1]
	PO - 2	Able to design and evaluate IT-based mathematics learning assessment instruments for the purposes of mathematics learning (instruments for assessing learning processes and outcomes, affective domains, knowledge and skills in school mathematics learning subjects (SMP/MTs, SMA/MA, or SMK) in accordance with the Curriculum Independence according to the demands of the 21st century [KU2]
	PO - 3	Able to make decisions based on the results of the mathematics learning assessment design produced in accordance with the demands of the 21st century in a responsible manner [KK2]
	PO - 4	Able to analyze basic concepts in learning assessment (mathematics) [P2]
	PLO-PO Matrix	

P.O	PLO-8	PLO-10	PLO-13
PO-1			
PO-2			
PO-3			
PO-4			

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
PO-1																
PO-2																
PO-3																
PO-4																

Short Course Description	This course will discuss basic concepts in mathematics learning assessment, which are used to design and evaluate IT-based mathematics learning assessment instruments for the purposes of mathematics learning (instruments for assessing learning processes and outcomes, affective domains, knowledge and skills in subject learning school mathematics (SMP/MTs, SMA/MA, or SMK) in accordance with the Independent Curriculum with a critical and innovative attitude according to the demands of the 21st century.	
References	**Main :**	

	1. Kubiszyn, Tom / I. Borich, Gary . 2007. Educational testing and measurement: classroom application and practice. New Jersey: John Wiley & Sons. 2. Brookhart, Susan M. 2010. How to assess higher-order thinking skills in your classroom. Alexandria: ASCD. 3. Arikunto, Suharsimi / I. Jabar, Cepi Safruddin Abdul. 2008. Evaluasi program pendidikan: pedoman teoritis bagi mahasiswa dan praktisi pendidikan. Jakarta: BumiAksara.
	Supporters:
Supporting lecturer	Dr. Hj. Masriyah, M.Pd. Dr. Endah Budi Rahaju, M.Pd. Dr. Heri Purnomo, M.Pd. Dini Kinati Fardah, S.Pd.Si., M.Pd. Ahmad Wachidul Kohar, S.Pd., M.Pd. Dr. Yurizka Melia Sari, 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	Examining the position of measurement, assessment and evaluation with a critical attitude	Analyze the position of measurement, assessment and evaluation	**Criteria:** Essay, accuracy of analysis results **Form of Assessment** : Participatory Activities	Case Study 2 X 50		**Material:** Measurement Theory **Bibliography:** *Kubiszyn, Tom / I. Borich, Gary . 2007. Educational testing and measurement: classroom application and practice. New Jersey: John Wiley & Sons.*	2%
2	Examining assessment theory (principles, objectives, functions, types) is carried out with a critical attitude	1.1. Analyze assessment principles 2.2. Analyze the assessment objectives 3.3. Analyze the function of assessment in mathematics learning	**Criteria:** Accuracy in assessment theory analysis **Form of Assessment** : Participatory Activities	Case Studies and Class Discussions 2 X 50		**Material:** Assessment of Learning Outcomes **References:** *Kubiszyn, Tom / I. Borich, Gary. 2007. Educational testing and measurement: classroom application and practice. New Jersey: John Wiley & Sons.*	2%
3	Examining Bloom's taxonomy of educational objectives and the basic principles of assessment procedures with a critical attitude	1.Explain the differences between the old Bloom's Taxonomy and the revised Bloom's Taxonomy 2.Create Higher Order Thinking Skill questions	**Criteria:** 1.Accuracy in explaining the differences between the old Bloom's Taxonomy and the revised Bloom's Taxonomy 2.Accuracy in distinguishing LOTS and HOTS mathematics questions **Form of Assessment** : Participatory Activities	Cased Based Learning & Discussion 2 X 50		**Material:** Higher Order Thinking Skills **Reference:** *Brookhart, Susan M. 2010. How to assess higher-order thinking skills in your classroom. Alexandria: ASCD.*	2%

4	Develop competency achievement indicators and learning objectives based on learning outcomes	1. Develop learning indicators 2. Explain the components of learning objectives 3. Explain the classification of knowledge dimensions	**Criteria:** 1. Participation during lectures is carried out through observing honest and independent attitudes with a weight of 20% 2. Products and Assessment Analysis Results are assessed as Tasks with a weight of 30% 3. UTS weight 20% 4. UAS weight 30% **Form of Assessment** : Participatory Activities	Flipped Learning & Discussion 2 X 50		**Material:** Objectives of Assessment **Literature:** *Kubiszyn, Tom / I. Borich, Gary . 2007. Educational testing and measurement: classroom application and practice. New Jersey: John Wiley & Sons.*	2%
5	Review and present technical theory, types, forms of tests and non-tests	1. Explain the meaning of the advantages and disadvantages of tests 2. Explaining techniques, types and forms of tests	**Criteria:** 1. Participation during lectures is carried out through observing honest and independent attitudes with a weight of 20% 2. Products and Assessment Analysis Results are assessed as Tasks with a weight of 30% 3. UTS weight 20% 4. UAS weight 30% **Form of Assessment** : Participatory Activities	Flipped Learning & Discussion 2 X 50		**Material:** Test and Non-Test **References:** *Kubiszyn, Tom / I. Borich, Gary . 2007. Educational testing and measurement: classroom application and practice. New Jersey: John Wiley & Sons.*	2%
6	Develop assessment instruments (tests) and scoring guidelines	1. Develop a scoring rubric 2. Explains test assessment rubrics, scoring, converting scores into grades 3. Interpreting learning results	**Criteria:** Accuracy in compiling the scoring rubric **Form of Assessment** : Project Results Assessment / Product Assessment	Project Based Learning 2 X 50		**Material:** Test Instrument Development **Literature:** *Kubiszyn, Tom / I. Borich, Gary . 2007. Educational testing and measurement: classroom application and practice. New Jersey: John Wiley & Sons.*	2%
7	Process and interpret assessment results (in the form of tests) manually and utilize software and how to report them	1. Processing test results 2. Explains reporting of test results	**Criteria:** Accuracy in processing test results **Form of Assessment** : Participatory Activities	Project Based Learning 2 X 50		**Material:** Processing Test Results **References:** *Kubiszyn, Tom / I. Borich, Gary . 2007. Educational testing and measurement: classroom application and practice. New Jersey: John Wiley & Sons.*	5%
8	UTS	-	**Criteria:** - **Form of Assessment** : Test	- 2 X 50		**Material:** - **Library:**	20%

9	1. Review and present technical theory, types, forms of tests and non-tests 2. Develop assessment instruments (non-tests) and scoring guidelines 3. Process and interpret assessment (non-test) results manually and utilize software and how to report them	1. 1. Explain the meaning of non-test (questionnaires, observations, and interviews and attitude scales) 2. 2. Explain the rules for preparing non-test questionnaires, observations and interviews and attitude scales) 3. 3. Develop questionnaires, positive and negative, observation and interview guidelines as well as attitude scales 4. 4. Processing the results of non-test questionnaires, observations and interviews and attitude scales 5. 5. Explain reporting of non-test results	**Criteria:** Weighting and Rubrics **Form of Assessment** : Participatory Activities	Flipped Learning and Class Discussion 2 X 50		**Material:** Non-Test Assessment **References:** *Kubiszyn, Tom / I. Borich, Gary . 2007. Educational testing and measurement: classroom application and practice. New Jersey: John Wiley & Sons.*	3%
10	1. Develop assessment instruments (tests) and scoring guidelines. 2. Process and interpret assessment results (in the form of tests) manually and utilize software and how to report them. 3. Develop assessment instruments (non-tests) and scoring guidelines. 4. Process and interpret assessment (non-test) results manually and utilize software and how to report them.	1. 1. Explain techniques in skills assessment (practice, product, project, portfolio, and other techniques) 2. 2. Develop practice, product, project and portfolio assessment instruments 3. 3. Explain the reporting of skills assessment results	**Criteria:** Weighting and Rubrics **Form of Assessment** : Participatory Activities	Flipped Learning and Class Discussion 2 X 50		**Material:** Non-Test Assessment **References:** *Kubiszyn, Tom / I. Borich, Gary . 2007. Educational testing and measurement: classroom application and practice. New Jersey: John Wiley & Sons.*	5%

11	1. Review and present numeracy assessments 2. Develop numeracy assessment instruments (tests) and scoring guidelines	1. Explain the meaning of numeracy assessment in the independent curriculum 2. Explain the various numeracy assessment techniques 3. Develop numeracy assessments and scoring rubrics based on certain competency frameworks (for example: problem solving, reasoning, or critical/creative thinking) 4. Analyzing assessments on international assessments (PISA, TIMSS)	**Criteria:** Weighting and Rubrics **Form of Assessment** : Participatory Activities, Practice/Performance	Case Based Learning, Presentations, Class Discussions 2 X 50		**Material:** HOTS **Reference:** *Brookhart, Susan M. 2010. How to assess higher-order thinking skills in your classroom. Alexandria: ASCD.*	5%
12	Review and present the theory of measuring instrument quality	1. 1. Explain validity and reliability 2. 2. Explain the factors that influence validity 3. 3. Explain the factors that influence reliability 4. 4. Explain the various types of validity of a test device 5. 5. Explain the various methods for determining the reliability of a test	**Criteria:** Weighting and Rubrics **Form of Assessment** : Participatory Activities, Practice/Performance	Flipped Learning, Presentations, Class Discussions 2 X 50		**Material:** Validity and Reliability **References:** *Kubiszyn, Tom / I. Borich, Gary . 2007. Educational testing and measurement: classroom application and practice. New Jersey: John Wiley & Sons.*	5%
13	Process and interpret assessment (non-test) results manually and utilize software and how to report them.	Collect data for instrument testing at selected school levels	**Criteria:** Assessment Analysis Products and Results are assessed as Assignments **Form of Assessment** : Practice / Performance	Project Based Learning 2 X 50		**Material:** Instrument Testing **Bibliography:** *Kubiszyn, Tom / I. Borich, Gary . 2007. Educational testing and measurement: classroom application and practice. New Jersey: John Wiley & Sons.*	5%
14	Process and interpret assessment (non-test) results manually and utilize software and how to report them.	1. Process test results that have been tested 2. Explains reporting of test results	**Criteria:** Participation during lectures is carried out through observing honest and independent attitudes **Form of Assessment** : Practice / Performance	Presentation, Class Discussion 2 X 50		**Material:** Reporting Test Results **References:** *Kubiszyn, Tom / I. Borich, Gary . 2007. Educational testing and measurement: classroom application and practice. New Jersey: John Wiley & Sons.*	5%

15	Analyze and interpret the results of measuring instrument quality tests manually and utilizing software	1.1. Analyze the test items, including: level of achievement of criteria-referenced item indicators, sensitivity index of criterion-referenced items, level of difficulty of test items, discriminating power, effectiveness of options, validity of norm-referenced items 2.2. Practicing test item analysis and determining test reliability with a computer program	**Criteria:** Participation during lectures is carried out through observing honest and independent attitudes **Form of Assessment** : Practice / Performance	Class Discussion 2 X 50		**Material:** Analysis of Test Results **Literature:** *Kubiszyn, Tom / I. Borich, Gary . 2007. Educational testing and measurement: classroom application and practice. New Jersey: John Wiley & Sons.*	5%
16	UAS	Create articles from the analysis of numeracy instruments that have been developed	**Criteria:** - **Form of Assessment** : Project Results Assessment / Product Assessment	2 X 50		**Material:** - **Library:**	30%

Evaluation Percentage Recap: Case Study

No	Evaluation	Percentage
1.	Participatory Activities	28%
2.	Project Results Assessment / Product Assessment	32%
3.	Practice / Performance	20%
4.	Test	20%
		100%

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.