	Universitas Negeri Surabaya Faculty of Mathematics and Natural Sciences Doctoral Study Program in Mathematics Education	Document Code

SEMESTER LEARNING PLAN

Courses	CODE	Course Family	Credit Weight			SEMESTER	Compilation Date
Knowledge and Praxis of Teacher Education and Prospective Teachers (Knowledge and Praxis of in-service and pre-service Teachers)	8400202051		**T=2**	**P=0**	**ECTS=5.04**	2	July 17, 2024

AUTHORIZATION	SP Developer	Course Cluster Coordinator	Study Program Coordinator
	.....	.....	Prof. Dr. Tatag Yuli Eko Siswono, S.Pd., M.Pd.

Learning model	**Project Based Learning**	
Program Learning Outcomes (PLO)	**PLO study program that is charged to the course**	
	Program Objectives (PO)	
	PO - 1	Describe the concept of knowledge and practice of teacher and prospective teacher education according to a scientific and critical attitude; (S2, P1)
	PO - 2	Analyzing the concepts of knowledge and practice of teacher and prospective teacher education with effective and communicative arguments; (KU2, P1)
	PO - 3	Applying the concept of knowledge and practice of teacher and prospective teacher education to solve mathematics education problems (KK1, P1)
	PLO-PO Matrix	

P.O
PO-1
PO-2
PO-3

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																

Short Course Description	Assessment of the knowledge and practice of teacher and prospective teacher education which includes the concepts of teacher knowledge, pedagogical content knowledge, technological content knowledge, mathematical literacy competence, beliefs, pedagogical and didactic knowledge of teachers and prospective teachers, learning design and evaluation at school and college levels, and development of teacher professionalism at school and college levels. Lectures begin with an explanation of concepts and principles, assignments and discussions with students, as well as presentations using ICT with an assessment system including assignments (30%), participation (20%), mid-semester assessment (20%) and final semester assessment (30%).
References	**Main :**

	1. Pengkajian pengetahuan dan praksis pendidikan guru dan calon guru yang meliputi konsep pengetahuan guru, pedagogical content knowledge, technological content knowledge, kompetensi literasi matematika, keyakinan, pedagogi dan didaktis pengetahuan guru dan calon guru, perancangan pembelajaran dan evaluasi di tingkat sekolah dan perguruan tinggi, dan pengembangan profesionalisme guru yang tingkat sekolah dan perguruan tinggi. Perkuliahan diawali dengan paparan konsep dan prinsip, penugasan dan diskusi dengan mahasiswa, serta presentasi dengan pemanfaatan TIKdengan sistem penilaian meliputi penugasan (30%), partisipasi (20%), penilaian tengah semester (20%) dan penilaian akhir semester (30%). 2. Cochran-Smith, M., & Lytle, S. L. (1999). Chapter 8: Relationships of knowledge and practice: Teacher learning in communities. Review of research in education, 24(1), 249-305. 3. Sullivan, P., & Wood, T. (2008). The International Handbook of Mathematics Teachers Education: Knowledge and beliefs in mathematics teaching and teaching development. Vol 1. Sense Publishers 4. Sullivan, P., & Wood, T. (2008). The International Handbook of Mathematics Teachers Education: Knowledge and beliefs in mathematics teaching and teaching development. Vol 1. Sense Publishers 5. Krainer, K., & Wood (2008). The International Handbook of Mathematics Teachers Education : Participants in Mathematics Teacher Education. Vol 3. Sense Publishers 6. Krainer, K., & Wood (2008). The International Handbook of Mathematics Teachers Education : Participants in Mathematics Teacher Education. Vol 3. Sense Publishers 7. Kaur, B., & Dindyal, J. (Eds.). (2010). Mathematical applications and modelling: Yearbook 2010. World Scientific. 8.] Verloop, N., Van Driel, J., & Meijer, P. (2001). Teacher knowledge and the knowledge base of teaching. International journal of educational research, 35(5), 441-461.
	Supporters:
	1. Hoy, A. W., Davis, H., & Pape, S. J. (2006). Teacher knowledge and beliefs 2. Mishra, P., & Koehler, M. J. (2006). Technological pedagogical content knowledge: A framework for teacher knowledge. Teachers college record, 108(6), 1017-1054. 3.] Thames, M. H., & Ball, D. L. (2010). What math knowledge does teaching require?. Teaching Children Mathematics, 17(4), 220-229 4. Spruce, R., & Bol, L. (2015). Teacher beliefs, knowledge, and practice of selfregulated learning. Metacognition and Learning, 10(2), 245-277
Supporting lecturer	Dr. Hj. Masriyah, M.Pd. Dr. Endah Budi Rahaju, M.Pd. Prof. Rooselyna Ekawati, Ph.D.

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	Sub-CPMK-1.1 Able to explain the concept of Teacher Education: Individual Mathematics Teacher as learner	Able to describe the concept of Teacher Education: Individual Mathematics Teacher as learner	**Criteria:** Independent and Group Assignments **Form of Assessment** : Participatory Activities, Project Results Assessment / Product Assessment	Classroom Activities: Collaborative Reciprocity; class discussion 2 x 50			5%
2	Sub-CPMK2 Able to explain the concepts of knowledge for teachers and prospective teachers	Able to explain the concepts of teacher and prospective teacher knowledge: Knowledge For Teaching	**Form of Assessment** : Project Results Assessment / Product Assessment	Classroom Activities: Collaborative Reciprocity; class discussion 2 x 50			0%
3	Sub-CPMK2 Able to explain research results related to Mathematics in and for teaching	Able to explain research results related to Mathematics in and for teaching	**Criteria:** Independent and Group Assignments **Form of Assessment** : Participatory Activities, Project Results Assessment / Product Assessment	Classroom Activities: Collaborative Reciprocity; class discussion 2 X 50			0%

4	Sub-CPMK-3 Able to describe research on assessments related to teacher knowledge qualitatively	Able to explain research results regarding teacher knowledge assessment	**Criteria:** Independent and Group Assignments **Form of Assessment** : Participatory Activities	Classroom Activities: Collaborative Reciprocity; class discussion 2 X 50			0%
5	Sub-CPMK-3 Able to describe research on assessments related to teacher knowledge quantitatively	Able to explain research results regarding teacher knowledge assessment	**Criteria:** Independent and Group Assignments	Classroom Activities: Collaborative Reciprocity; class discussion 2 X 50			0%
6		Able to describe cases as tools in Mathematics Teacher Education	**Form of Assessment** : Participatory Activities	Classroom Activities: Collaborative Reciprocity; class discussion 2 X 50			5%
7	Sub-CPMK-1 Able to synthesize and describe tasks in mathematics teacher education	Able to explain the concept of Tasks in Mathematics Teacher Education	**Criteria:** Independent and Group Assignments **Form of Assessment** : Project Results Assessment / Product Assessment, Portfolio Assessment	Classroom Activities: Collaborative Reciprocity; class discussion 2 X 50			30%
8				Midterm Evaluation			20%
9	Sub-CPMK-3 Able to synthesize Research in Mathematics Education as tools in MTE	Able to explain research in the field of Mathematics Education as a tool in MTE	**Form of Assessment** : Project Results Assessment / Product Assessment	Classroom Activities: Collaborative Reciprocity; class discussion 2 x 50			0%
10	Sub-CPMK-3. Able to apply the concept of knowledge and praxis of mathematics teacher education in small research	Able to apply the concept of knowledge and praxis of mathematics teacher education in small research	**Criteria:** Independent and Group Assignments **Form of Assessment** : Participatory Activities	Classroom Activities: Collaborative Reciprocity; class discussion 2 x 50			0%
11	Sub-CPMK-3. Able to apply the concept of knowledge and praxis of mathematics teacher education in small research	Able to apply the concept of knowledge and praxis of mathematics teacher education in small research	**Criteria:** Independent and Group Assignments	Classroom Activities: Collaborative Reciprocity; class discussion 2 x 50			0%
12	Sub-CPMK-3. Able to apply the concept of knowledge and praxis of mathematics teacher education in small research	Able to apply the concept of knowledge and praxis of mathematics teacher education in small research	**Criteria:** Independent and Group Assignments	Classroom Activities: Collaborative Reciprocity; class discussion 2 x 50			5%
13	Sub-CPMK-3. Able to apply the concept of knowledge and praxis of mathematics teacher education in small research		**Criteria:** Independent and Group Assignments **Form of Assessment** : Participatory Activities	Classroom Activities: Collaborative Reciprocity; class discussion 2 x 50			0%

14	Sub-CPMK-3. Able to communicate the results of applying the concept of knowledge and praxis of mathematics teacher education in small research	Able to communicate the results of knowledge concepts and praxis of mathematics teacher education in small research	**Criteria:** Independent and Group Assignments	Classroom Activities: Collaborative Reciprocity; class discussion 2 x 50			0%
15	Sub-CPMK-3. Able to communicate the results of applying the concept of knowledge and praxis of mathematics teacher education in small research	Able to communicate the results of knowledge concepts and praxis of mathematics teacher education in small research	**Criteria:** Independent and Group Assignments **Form of Assessment** : Project Results Assessment / Product Assessment	Classroom Activities: Collaborative Reciprocity; class discussion 2 x 50			30%
16							0%

Evaluation Percentage Recap: Project Based Learning

No	Evaluation	Percentage
1.	Participatory Activities	7.5%
2.	Project Results Assessment / Product Assessment	47.5%
3.	Portfolio Assessment	15%
		70%

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.