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

SEMESTER LEARNING PLAN

Courses	CODE	Course Family	Credit Weight			SEMESTER	Compilation Date
ANALYSIS OF LATEST JOURNAL ARTICLES	8400103035	Compulsory Study Program Subjects	T=3	P=0	ECTS=7.56	1	June 20, 2022

AUTHORIZATION	SP Developer	Course Cluster Coordinator	Study Program Coordinator
	Prof. Dr. Budi Jatmiko, M.Pd.	Prof. Dr. Budi Jatmiko, M.Pd.	Prof. Dr. Suyatno, M.Si.

Learning model	**Project Based Learning**	
Program Learning Outcomes (PLO)	**PLO study program that is charged to the course**	
	PLO-8	2. Able to prepare scientific arguments and solutions based on a critical view of facts, concepts, principles or theories that can be justified scientifically and academically, and communicate them through scientific publications in reputable international journals
	Program Objectives (PO)	
	PO - 1	Have an honest and independent attitude by applying science education research ideas in proposing innovations in the field of science education.
	PO - 2	Utilizing technology, information and communication to achieve competency in having insight into the development of science education research
	PO - 3	Have knowledge and insight into the latest science education research articles, issues and trends, including: the direction of development of science education research, the latest science education research products, analysis of the impact of science education research results on the development of science education
	PO - 4	Analyze articles and make decisions regarding the results of science education research to develop a framework for thinking related to the dissertation
	PLO-PO Matrix	

P.O	PLO-8
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 examines the anatomy of articles to analyze issues and trends in the development of science education research contained in articles resulting from recent research that are relevant to the dissertation problem being developed, then develops a framework of thinking that leads to a temporary answer to the problem (hypothesis) and/or prototype of a hypothetical product being developed	
References	**Main :**	

1. Creswell, J.W. (2014). Research Design. Qualitative, Quantitative and Mixed Methods Approaches. 4th Ed. New York: Sage
2. Mack, CA (2018). How to Write a Good Scientific Paper. USA: Spie Press
3. Napitupulu, dkk (2020). Menulis Artikel Ilmiah untuk Publikasi. Medan: Yayasan Kita Menulis
4. Sugiyono (2015). Metode Penelitian Pendidikan. Pendekatan Kuantitatif, Kualitatif dan R &D. Cetakan ke-22. Bandung: Alfabeta.
5. Yin, R.K. (2016). Qualitative Reasearch from Strat to Finish. 2nd Ed. New York: Guilford Press.
6. Artikel bidang Pendidikan Sains di dalam Jurnal nasional terakreditasi dan atau jurnal internasional bereputasi yang dipubikasi dalam 5 (lima) tahun terakhir

Supporters:	
Supporting lecturer	MUSLIMIN IBRAHIM Prof. Dr. Budi Jatmiko, 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	Understand the anatomy of an article and its function	Accuracy in identifying the main parts of an article and their functions	**Criteria:** Based on the assessment rubric that has been created by the teaching lecturer **Form of Assessment** : Project Results Assessment / Product Assessment	Presentation, discussion and PjBL 3 x 50 minutes	Presentation, discussion and PjBL 3 x 50 minutes	**Material:** Article atoms and their functions **References:** *Mack, CA (2018). How to Write a Good Scientific Paper. USA: Spie Press*	5%
2	Understand the anatomy of an article and its function	Accuracy in identifying the main parts of an article and their functions	**Criteria:** Based on the assessment rubric that has been created by the teaching lecturer **Form of Assessment** : Project Results Assessment / Product Assessment	Presentation, discussion and PjBL 3 x 50 minutes	Presentation, discussion and PjBL 3 x 50 minutes	**Material:** Article atoms and their functions **References:** *Napitupulu, et al (2020). Writing Scientific Articles for Publication. Medan: Kita Write Foundation*	5%
3	Understand issues and trends in the development of science education research based on the results of analysis of the latest articles	Accuracy in describing issues in the development of science education research as well as trends in the development of science education research based on the results of analysis of the latest articles	**Criteria:** Based on the assessment rubric that has been created by the teaching lecturer **Form of Assessment** : Project Results Assessment / Product Assessment	Presentation, discussion and PjBL 3 x 50 minutes	Presentation, discussion and PjBL 3 x 50 minutes	**Material:** Introduction to Scientific Articles **Bibliography:** **Material:** Issues and trends in the development of science education research **Library:** *Articles in the field of Science Education in accredited national journals and/or reputable international journals published in the last 5 (five) years*	8%

4	Understand issues and trends in the development of science education research based on the results of analysis of the latest articles	Accuracy in describing issues in the development of science education research as well as trends in the development of science education research based on the results of analysis of the latest articles	**Criteria:** Based on the assessment rubric that has been created by the teaching lecturer **Form of Assessment** : Project Results Assessment / Product Assessment	Presentation, discussion and PjBL 3 x 50 minutes	Presentation, discussion and PjBL 3 x 50 minutes	**Material:** Issues and trends in the development of science education research **Library:** *Articles in the field of Science Education in accredited national journals and/or reputable international journals published in the last 5 (five) years*	8%
5	• Understand issues and trends in the development of science education research based on the results of analysis of the latest articles	Accuracy in describing issues in the development of science education research as well as trends in the development of science education research based on the results of analysis of the latest articles	**Criteria:** Based on the assessment rubric that has been created by the teaching lecturer **Form of Assessment** : Project Results Assessment / Product Assessment	Presentation, discussion and PjBL 3 x 50 minutes	Presentation, discussion and PjBL 3 x 50 minutes	**Material:** Issues and trends in the development of science education research **Library:** *Articles in the field of Science Education in accredited national journals and/or reputable international journals published in the last 5 (five) years*	8%
6	Understand issues and trends in the development of science education research based on the results of analysis of the latest articles	Accuracy in describing issues in the development of science education research as well as trends in the development of science education research based on the results of analysis of the latest articles	**Criteria:** Based on the assessment rubric that has been created by the teaching lecturer **Form of Assessment** : Project Results Assessment / Product Assessment	Presentation, discussion and PjBL 3 x 50 minutes	Presentation, discussion and PjBL 3 x 50 minutes	**Material:** Issues and trends in the development of science education research **Library:** *Articles in the field of Science Education in accredited national journals and/or reputable international journals published in the last 5 (five) years*	8%

7	Understand issues and trends in the development of science education research based on the results of analysis of the latest articles	Accuracy in describing issues in the development of science education research as well as trends in the development of science education research based on the results of analysis of the latest articles	**Criteria:** Based on the assessment rubric that has been created by the teaching lecturer **Form of Assessment** : Project Results Assessment / Product Assessment	Presentation, discussion and PjBL 3 x 50 minutes	Presentation, discussion and PjBL 3 x 50 minutes	**Material:** Issues and trends in the development of science education research **Library:** *Articles in the field of Science Education in accredited national journals and/or reputable international journals published in the last 5 (five) years*	8%
8	Mid-semester exam (Final skills TM-1 to TM-7)	TM-1 indicators up to TM-7 indicators	**Criteria:** Based on the assessment rubric that has been created by the teaching lecturer **Form of Assessment** : Project Results Assessment / Product Assessment	Writing Test in the form of a description (essay) or giving a replacement assignment for UTS 2 x 50 minutes	Writing Test in the form of a description (essay) or giving a replacement assignment for UTS 2x50 minutes	**Material:** Learning topics from TM-1 to TM-7 **Library:**	5%
9	Skilled in developing a research thinking framework based on the results of article analysis	Accuracy in developing a dissertation research thinking framework based on the results of article analysis and compiling theoretical arguments related to hypotheses and/or hypothetical product prototypes	**Criteria:** Based on the assessment rubric that has been created by the teaching lecturer **Form of Assessment** : Project Results Assessment / Product Assessment	Presentation, discussion and PjBL 3 x 50 minutes	Presentation, discussion and PjBL 3 x 50 minutes	**Material:** Development of research thinking framework and theoretical arguments **Reference:** *Sugiyono (2015). Educational Research Methods. Quantitative, Qualitative and R&D Approaches. 22nd printing. Bandung: Alphabeta.*	5%
10	Skilled in developing a research thinking framework based on the results of article analysis	Accuracy in developing a dissertation research thinking framework based on the results of article analysis and compiling theoretical arguments related to hypotheses and/or hypothetical product prototypes	**Criteria:** Based on the assessment rubric that has been created by the teaching lecturer **Form of Assessment** : Project Results Assessment / Product Assessment	Presentation, discussion and PjBL 3 x 50 minutes	Presentation, discussion and PjBL 3 x 50 minutes	**Material:** Development of research thinking framework and theoretical arguments **References:** *Creswell, JW (2014). Research Design. Qualitative, Quantitative and Mixed Methods Approaches. 4th Ed. New York: Sage*	5%

11	Skilled in developing a research thinking framework based on the results of article analysis	Accuracy in developing a dissertation research thinking framework based on the results of article analysis and compiling theoretical arguments related to hypotheses and/or hypothetical product prototypes	**Criteria:** Based on the assessment rubric that has been created by the teaching lecturer **Form of Assessment** : Project Results Assessment / Product Assessment	Presentation, discussion and PjBL 3 x 50 minutes	Presentation, discussion and PjBL 3 x 50 minutes	**Material:** Development of research thinking framework and theoretical arguments **Reference:** *Napitupulu, et al (2020). Writing Scientific Articles for Publication. Medan: Kita Write Foundation*	5%
12	Skilled in developing a research thinking framework based on the results of article analysis	Accuracy in developing a dissertation research thinking framework based on the results of article analysis and compiling theoretical arguments related to hypotheses and/or hypothetical product prototypes	**Criteria:** Based on the assessment rubric that has been created by the teaching lecturer **Form of Assessment** : Project Results Assessment / Product Assessment	Presentation, discussion and PjBL 3 x 50 minutes	Presentation, discussion and PjBL 3 x 50 minutes	**Material:** Development of research thinking framework and theoretical arguments **References:** *Mack, CA (2018). How to Write a Good Scientific Paper. USA: Spie Press*	5%
13	Skilled in developing a research thinking framework based on the results of article analysis	Accuracy in developing a dissertation research thinking framework based on the results of article analysis and compiling theoretical arguments related to hypotheses and/or hypothetical product prototypes	**Criteria:** Based on the assessment rubric that has been created by the teaching lecturer **Form of Assessment** : Project Results Assessment / Product Assessment	Presentation, discussion and PjBL 3 x 50 minutes	Presentation, discussion and PjBL 3 x 50 minutes	**Material:** Development of research thinking framework and theoretical arguments **Reference:** *Sugiyono (2015). Educational Research Methods. Quantitative, Qualitative and R&D Approaches. 22nd printing. Bandung: Alphabeta.*	5%
14	Skilled in developing a research thinking framework based on the results of article analysis	Accuracy in developing a dissertation research thinking framework based on the results of article analysis and compiling theoretical arguments related to hypotheses and/or hypothetical product prototypes	**Criteria:** Based on the assessment rubric that has been created by the teaching lecturer **Form of Assessment** : Project Results Assessment / Product Assessment	Presentation, discussion and PjBL 3 x 50 minutes	Presentation, discussion and PjBL 3 x 50 minutes	**Material:** Development of research thinking framework and theoretical arguments **References:** *Yin, RK (2016). Qualitative Research from Strat to Finish. 2nd Ed. New York: Guilford Press.*	5%

15	Skilled in developing a research thinking framework based on the results of article analysis	Accuracy in developing a dissertation research thinking framework based on the results of article analysis and compiling theoretical arguments related to hypotheses and/or hypothetical product prototypes	**Criteria:** Based on the assessment rubric that has been created by the teaching lecturer **Form of Assessment** : Project Results Assessment / Product Assessment	Presentation, discussion and PjBL 3 x 50 minutes	Presentation, discussion and PjBL 3 x 50 minutes	**Material:** Development of research thinking framework and theoretical arguments **Reference:** *Sugiyono (2015). Educational Research Methods. Quantitative, Qualitative and R&D Approaches. 22nd printing. Bandung: Alphabeta.*	10%
16	Final Capabilities from TM-9 to TM-15	TM-9 indicators up to TM-15 indicators	**Criteria:** Based on the assessment rubric that has been created by the teaching lecturer **Form of Assessment** : Project Results Assessment / Product Assessment	Written test in the form of a description (essay) or giving a replacement assignment for UAS 2 x 50 minutes	Written test in the form of a description (essay) or giving a replacement assignment for UAS 2 x 50 minutes	**Material:** Learning topics from TM-9 to TM-15 **Library:**	5%

Evaluation Percentage Recap: Project Based Learning

No	Evaluation	Percentage
1.	Project Results Assessment / Product Assessment	100%
		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.