



Universitas Negeri Surabaya
Faculty of Mathematics and Natural Sciences
Master of Science Education Study Program

Document Code

SEMESTER LEARNING PLAN

Courses	CODE	Course Family	Credit Weight	SEMESTER	Compilation Date																
Science Education Research Methodology	8410103189		T=3 P=0 ECTS=6.72	1	July 17, 2024																
AUTHORIZATION	SP Developer		Course Cluster Coordinator		Study Program Coordinator																
		Dr. Eko Hariyono, 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)																				
	PLO-PO Matrix																				
		<table border="1" style="margin: auto;"> <tr> <td style="width: 10%;">P.O</td> <td colspan="15"></td> </tr> </table>					P.O														
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Short Course Description	This course examines the types of qualitative, quantitative, mixed method and developmental science education research through the activities of identifying and formulating problems, hypotheses, research variables, research designs, research instruments, research data collection and analysis techniques, which are realized in the research proposal. This course presents theoretical discussion activities and assignments for preparing educational research proposals as the final product of the course.																				
	<p>References Main :</p> <ol style="list-style-type: none"> 1. Creswell, J.W. 2008. Educational Research: Planning, Conducting, and Evaluating Quantitative Research. 3rd Edition. New Jersey: Pearson Prentice Hall. 2. Gall, M.D., Gall, J.P., Borg, W.R. 2003. Educational Research: An Introduction. Boston: Pearson Education, Inc. 3. Gay, L.R., Mills, G.E., Airasian, P.W. 2012. Educational Research: Competencies for Analysis and Application. Boston: Pearson 4. Creswell, J.W. and Clark, V.P. 2007. Mixed Methods Research. California: Sage Publication 5. Gall, M.D., Gall, J.P., Borg, W.R. 2003. Educational Research: An Introduction. USA: Pearson Education, Inc. 6. Plomp, T. And Nieveen, N. 2013. Educational Design Research: An Introduction. Netherland, SLO <p>Supporters:</p>																				
Supporting lecturer	Prof. Dr. Leny Yuanita, M.Kes. Prof. Dr. Achmad Lutfi, M.Pd. Prof. Dr. Budi Jatmiko, M.Pd. Prof. Dr. Suyatno, M.Si.																				
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	· Understanding the Nature of Research Mastering the principles and methods of quantitative, qualitative and mixed method research in science education	1. Explain the nature of research. 2. Compare various research approaches. 3. Explain various types of research	Criteria: 1.- 25% weight breakdown test 2.- Proposal assessment - performance and participation 75%	Presentations, discussions and assignments 3 X 50			0%
2	· Mastering the principles and methods of quantitative, qualitative and mixed method research in science education	1. Explain the principles of science education research 2. Explain the types of science education research 3. Explain the differences between quantitative, qualitative, mixed method and development research	Criteria: 1.- 25% weight breakdown test 2.- Proposal assessment - performance and participation 75%	Presentation and discussion 3 X 50			0%
3	· Mastering the principles and methods of quantitative, qualitative and mixed method research in science education	1. Explain qualitative research design 2. Explain case study research design	Criteria: 1.- 25% weight breakdown test 2.- Proposal assessment - performance and participation 75%	Presentation, discussion and assigning 3 X 50			0%
4	· Mastering the principles and methods of quantitative, qualitative and mixed method research in science education	1. Explain the principles and design of mixed method research 2. Explain triangulation design 3. Explain embedded design 4. Explain explanatory design 5. Explain exploratory design	Criteria: 1.- Test description weight 25 2.- Proposal assessment - performance and participation 75%	Presentation, discussion and assigning 3 X 50			0%
5	· Mastering the principles and methods of quantitative, qualitative and mixed method research in science education	1. Explain the principles and design of development research 2. Explain 4D design 3. Explain Borg & Gall design 4. Other development designs	Criteria: 1.- Test description weight 25 2.- Performance assessment and participation 75%	Percentage and discussion 3 X 50			0%
6	· Able to identify problems and alternative problem solving in science education through an inter or multidisciplinary approach	1. Identify the problem 2. Formulate the research problem 3. Write down the background of the problem 4. Write down the research objectives	Criteria: - Assessment - performance and participation	3 X 50 workshops and presentations			0%
7	Able to identify problems and alternative problem solving in science education through an inter- or multidisciplinary approach	· Reviewing the literature · Formulating a hypothesis · Identifying variables and types of variables · Describing the characteristics of each type of variable · Designing a research design	Criteria: 1.- 2.- Performance and participation assessment	3 X 50 workshops and presentations			0%

8	UTS	UTS	Criteria: UTS	Lectures and discussions 3 X 50			0%
9	Understand research design	1. Explain the various research designs. 2. Compare various research designs	Criteria: 1.- Test description weight 25 2.- Proposal assessment - performance and participation 75%	Lectures and discussions 3 X 50			0%
10	Understanding qualitative research	1. Explain the meaning of qualitative research. 2. Compare the characteristics of qualitative and quantitative research	Criteria: 1.- Test description weight 25 2.- Proposal assessment - performance and participation 75%	Presentations, discussions and structured assignments 3 X 50			0%
11	Understand qualitative research methods	1. Explain the characteristics of ethnographic research. 2. Explain the characteristics of historical research	Criteria: 1.- Test description weight 25 2.- Proposal assessment - performance and participation 75%	Presentations, discussions and structured assignments 3 X 50			0%
12	Understand the nature of research by practitioners	1. Explain the characteristics of CAR 2. Explain the differences between traditional research and CAR	Criteria: 1.- Test description weight 25 2.- Proposal assessment - performance and participation 75%	Presentations, discussions and structured assignments 3 X 50			0%
13	Able to write research proposals	Skilled in writing research proposals to solve science education problems	Criteria: 1.- Test description weight 25 2.- Proposal assessment - performance and participation 75%	Presentation, discussion and proposal writing 3 X 50			0%
14	Able to write research proposals	Skilled in writing research proposals to solve science education problems	Criteria: 1.- Test description weight 25 2.- Proposal assessment - performance and participation 75%	Presentation, discussion and proposal writing 3 X 50			0%
15	Able to write research articles	Skilled in writing research articles based on certain research results	Criteria: 1.- Test description weight 25 2.- Proposal assessment - performance and participation 75%	Presentation, discussion and article writing 3 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.