	Universitas Negeri Surabaya **Faculty of Social Sciences and Law,** **Social Sciences Education Undergraduate Study Program**	**Document Code**

SEMESTER LEARNING PLAN

Courses	CODE	Course Family	Credit Weight			SEMESTER	Compilation Date
Statistics	8420702070		T=2	P=0	ECTS=3.18	4	July 17, 2024

AUTHORIZATION	SP Developer	Course Cluster Coordinator	Study Program Coordinator
	.....	.....	Dr. Nuansa Bayu Segara, 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	Students have the ability to master statistical techniques for quantitative data analysis in educational research which is integrated with mastery of information technology, perform work using concepts, theories, methods, materials and/or instruments, obtained through learning educational statistics, understand the role of related teachers learning principles and factors that influence learning in social studies learning

PLO-PO Matrix

P.O
PO-1

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																

Short Course Description	The educational statistics course provides students with knowledge and skills in order to complete final assignments in the form of theses, especially those that use a quantitative research approach along with methods for collecting data, processing or analyzing it and drawing conclusions based on the data collection and analysis carried out.

References

Main :

1. Arikunto, Suharsimi. 2006. Prosedur Penelitian Suatu Pendekatan Praktik . Jakarta: Rineka Cipta
2. Azwar, S. 2004. Metode Penelitian . Yogyakarta: Pustaka Pelajar
3. Bugin. 2001. Metodologi Penelitian Sosial Format-Format Kuantitatif dan Kualitatif . Surabaya: Airlangga University Press
4. Sudjana. 2001. Metode Statistika . Bandung: Tarsito
5. Sunarto. 2001. Metodologi Penelitian Ilmu-ilmu Sosial dan Pendidikan . Surabaya: Unesa
6. Sujianto, A.E. 2009. Aplikasi Statistik dengan SPSS 16 . 0
7. Riduwan, 2009. Skala Pengukuran Variable-Variable Penelitian . Bandung: CV Alfabeta
8. Riduwan dan Sunarto, 2009. Pengantar Statistika untuk Penelitian Pendidikan, Sosial, Ekonomi, Komunikasi dan Bisnis . Bandung: CV Alfabeta
9. Kariadinata, R dan Abdurahman, maman. 2012. Dasar-dasar Statistik Pendidikan. Bandung: Pustaka Setia
10. Nuryadi, dkk. 2017. Dasar-dasar Statistik Penelitian. Yogyakarta: Sibuku Media

Supporters:

Supporting lecturer	Dra. Ita Mardiani Zain, M.Kes. Dr. Sukma Perdana Prasetya, S.Pd., M.T. Muhammad Ilyas Marzuqi, 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 statistics and educational statistics		**Criteria:** formative **Form of Assessment** : Participatory Activities	1. Students carry out literacy in the basics of educational statistics 2. Discuss definitions and basic concepts of statistics and educational statistics 3. Formulate basic concepts of statistics and educational statistics 4. Students express opinions based on findings and discussion results 2 X 50	1. Students carry out literacy in the basics of educational statistics 2. Discuss definitions and basic concepts of statistics and educational statistics 3. Formulate basic concepts of statistics and educational statistics 4. Students express opinions based on findings and discussion results 2 X 50	**Material:** introduction **Bibliography:** *Kariadinata, R and Abdurahman, maman. 2012. Basics of Education Statistics. Bandung: Pustaka Setia* **Material:** statistics and statistics **References:** *Nuryadi, et al. 2017. Basics of Research Statistics. Yogyakarta: Sibuku Media*	5%
2	Analyze data and frequency distribution	Students can analyze statistical data and interpret frequency distribution tables	**Criteria:** formative **Form of Assessment** : Participatory Activities	1. Students carry out literacy regarding data and frequency distribution 2. In groups identify types of statistical data and frequency distribution 3. Arrange the available data into a frequency distribution table 4. Students interpret the 2 X 50 frequency distribution table data	1. Students carry out literacy regarding data and frequency distribution 2. In groups identify types of statistical data and frequency distribution 3. Arrange the available data into a frequency distribution table 4. Students interpret the 2 X 50 frequency distribution table data	**Material:** Frequency distribution **References:** *Kariadinata, R and Abdurahman, maman. 2012. Basics of Education Statistics. Bandung: Pustaka Setia* **Material:** Data presentation **References:** *Nuryadi, et al. 2017. Basics of Research Statistics. Yogyakarta: Sibuku Media*	5%

3	Create and present statistical data	Students can create and present statistical data	**Criteria:** formative **Form of Assessment** : Participatory Activities	1. In groups, students create a simple survey containing statistical data criteria 2. Collect data through surveys in class 3. Tabulate data 4. Present statistical data 2 X 50	1. In groups, students create a simple survey containing statistical data criteria 2. Collect data through surveys in class 3. Tabulate data 4. Present statistical data 2 X 50	**Material:** Frequency distribution **References:** *Kariadinata, R and Abdurahman, maman. 2012. Basics of Education Statistics. Bandung: Pustaka Setia* **Material:** Data presentation **References:** *Nuryadi, et al. 2017. Basics of Research Statistics. Yogyakarta: Sibuku Media*	5%
4	Students can analyze statistical inference	Students can create and analyze research hypotheses	**Criteria:** formative **Form of Assessment** : Participatory Activities	1. Students carry out literacy related to statistical inference 2. Differentiate research variables 3. Create research hypotheses based on 2 X 50 research variables	1. Students carry out literacy related to statistical inference 2. Differentiate research variables 3. Create research hypotheses based on 2 X 50 research variables	**Material:** statistical inference **Reference:** *Nuryadi, et al. 2017. Basics of Research Statistics. Yogyakarta: Sibuku Media* **Material:** research hypothesis **Reader:** *Sunarto. 2001. Research Methodology in Social Sciences and Education. Surabaya: Unesa*	5%
5	Students can analyze educational research statistical inferences	Students can create and analyze research hypotheses in the field of education	**Criteria:** formative **Form of Assessment** : Participatory Activities, Project Results Assessment / Product Assessment	1. Students search for educational research titles 2. Describe research variables 3. Students create research hypotheses based on educational research titles 4. Conduct class discussions regarding educational research hypotheses that have been created 2 X 50	1. Students search for educational research titles 2. Describe research variables 3. Students create research hypotheses based on educational research titles 4. Conduct class discussions regarding educational research hypotheses that have been created 2 X 50	**Material:** statistical inference **Reference:** *Nuryadi, et al. 2017. Basics of Research Statistics. Yogyakarta: Sibuku Media* **Material:** research hypothesis **Reader:** *Sunarto. 2001. Research Methodology in Social Sciences and Education. Surabaya: Unesa*	5%

6	Students can carry out data reliability and validity test calculations using the SPSS application	Students can carry out reliability and validity tests using the SPSS application	**Criteria:** formative **Form of Assessment** : Assessment of Project Results / Product Assessment, Practices / Performance	1. Students carry out literacy related to research data presented by lecturers 2. carry out reliability test calculations 3. carry out validity test calculations 2 X 50	1. Students carry out literacy related to research data presented by lecturers 2. carry out reliability test calculations 3. carry out validity test calculations 2 X 50	**Material:** reliability and validity tests **References:** *Arikunto, Suharsimi. 2006. Research Procedures A Practical Approach. Jakarta: Rineka Cipta* **Material:** reliability and validity of data **References:** *Nuryadi, et al. 2017. Basics of Research Statistics. Yogyakarta: Sibuku Media*	5%
7	Students can carry out normality and homogeneity test calculations	Students can carry out normality and homogeneity tests	**Criteria:** formative **Form of Assessment** : Practice / Performance	1. Students carry out literacy related to research data presented by the lecturer 2. carry out normality test calculations 3. carry out 2 X 50 homogeneity test calculations	1. Students carry out literacy related to research data presented by the lecturer 2. carry out normality test calculations 3. carry out 2 X 50 homogeneity test calculations	**Material:** normality and homogeneity tests **References:** *Nuryadi, et al. 2017. Basics of Research Statistics. Yogyakarta: Sibuku Media*	5%
8	Midterm Exam (UTS)		**Criteria:** Summative **Form of Assessment** : Project Results Assessment / Product Assessment	Midterm Exam (UTS) 2 X 50	Midterm Exam (UTS)	**Material:** - **References:** *Nuryadi, et al. 2017. Basics of Research Statistics. Yogyakarta: Sibuku Media* **Material:** - **References:** *Arikunto, Suharsimi. 2006. Research Procedures A Practical Approach. Jakarta: Rineka Cipta* **Material:** - **References:** *Kariadinata, R and Abdurahman, maman. 2012. Basics of Education Statistics. Bandung: Pustaka Setia*	15%

9	Students can carry out t-test calculations and analysis	able to carry out t-test calculations and analysis	**Criteria:** formative **Form of Assessment** : Assessment of Project Results / Product Assessment, Practices / Performance	1. Students carry out identification related to research data presented by the lecturer 2. carry out paired sample t-test calculations 3. carry out independent sample t-test calculations 4. carry out analysis of the calculated data 5. draw conclusions from the results of data analysis 2 X 50	1. Students carry out identification related to research data presented by the lecturer 2. carry out paired sample t-test calculations 3. carry out independent sample t-test calculations 4. carry out analysis of the calculated data 5. draw conclusions from the results of data analysis 2 X 50	**Material:** - **References:** *Nuryadi, et al. 2017. Basics of Research Statistics. Yogyakarta: Sibuku Media* **Material:** - **References:** *Arikunto, Suharsimi. 2006. Research Procedures A Practical Approach. Jakarta: Rineka Cipta* **Material:** - **References:** *Kariadinata, R and Abdurahman, maman. 2012. Basics of Education Statistics. Bandung: Pustaka Setia*	5%
10	Students can carry out calculations and analysis of ANOVA tests	can carry out calculations and analysis of ANOVA tests	**Criteria:** formative **Form of Assessment** : Assessment of Project Results / Product Assessment, Practices / Performance	1. Students listen to the explanation from the lecturer, and carry out iterations related to ANOVA 2. Students carry out identification related to research data presented by the lecturer 3. carry out univariate ANOVA test calculations 4. carry out multivariate ANOVA test calculations 5. carry out data analysis and conclusions 2 X 50	1. Students listen to the explanation from the lecturer, and carry out iterations related to ANOVA 2. Students carry out identification related to research data presented by the lecturer 3. carry out univariate ANOVA test calculations 4. carry out multivariate ANOVA test calculations 5. carry out data analysis and conclusions 2 X 50	**Material:** - **References:** *Nuryadi, et al. 2017. Basics of Research Statistics. Yogyakarta: Sibuku Media* **Material:** - **References:** *Arikunto, Suharsimi. 2006. Research Procedures A Practical Approach. Jakarta: Rineka Cipta* **Material:** - **References:** *Kariadinata, R and Abdurahman, maman. 2012. Basics of Education Statistics. Bandung: Pustaka Setia*	5%

11	Students can perform correlation analysis and linear regression test calculations	can carry out calculations and analysis of linear regression tests	**Criteria:** formative **Form of Assessment** : Assessment of Project Results / Product Assessment, Practices / Performance	1. Students listen to the explanation from the lecturer, and carry out iterations related to linear regression 2. Students carry out identification related to research data 3. carry out simple linear regression test calculations 4. carry out multiple linear regression test calculations 5. carry out data analysis and conclusions 2 X 50	1. Students listen to the explanation from the lecturer, and carry out iterations related to linear regression 2. Students carry out identification related to research data 3. carry out simple linear regression test calculations 4. carry out multiple linear regression test calculations 5. carry out data analysis and conclusions 2 X 50	**Material:** - **References:** *Nuryadi, et al. 2017. Basics of Research Statistics. Yogyakarta: Sibuku Media* **Material:** - **References:** *Arikunto, Suharsimi. 2006. Research Procedures A Practical Approach. Jakarta: Rineka Cipta* **Material:** - **References:** *Kariadinata, R and Abdurahman, maman. 2012. Basics of Education Statistics. Bandung: Pustaka Setia*	5%
12	Students can perform non-parametric statistical test calculations	can carry out calculations and analysis of non-parametric tests	**Criteria:** formative **Form of Assessment** : Project Results Assessment / Product Assessment	1. Students listen to the explanation from the lecturer, and carry out iterations related to non-parametric statistics 2. Students carry out identification related to research data 3. carry out non-parametric test calculations 4. carry out data analysis and conclusions 2 X 50	1. Students listen to the explanation from the lecturer, and carry out iterations related to non-parametric statistics 2. Students carry out identification related to research data 3. carry out non-parametric test calculations 4. carry out data analysis and conclusions 2 X 50	**Material:** - **References:** *Nuryadi, et al. 2017. Basics of Research Statistics. Yogyakarta: Sibuku Media* **Material:** - **References:** *Arikunto, Suharsimi. 2006. Research Procedures A Practical Approach. Jakarta: Rineka Cipta* **Material:** - **References:** *Kariadinata, R and Abdurahman, maman. 2012. Basics of Education Statistics. Bandung: Pustaka Setia*	5%

13	Students can prepare field data collection instruments	can prepare field data collection instruments	**Criteria:** formative **Form of Assessment** : Assessment of Project Results / Product Assessment, Practices / Performance	1. Students carry out discussions related to the research theme 2. Students prepare research variables 3. prepare research instruments 4. carry out research data analysis plans 2 X 50	1. Students carry out discussions related to the research theme 2. Students prepare research variables 3. prepare research instruments 4. carry out research data analysis plans 2 X 50	**Material:** - **References:** *Nuryadi, et al. 2017. Basics of Research Statistics. Yogyakarta: Sibuku Media* **Material:** - **References:** *Arikunto, Suharsimi. 2006. Research Procedures A Practical Approach. Jakarta: Rineka Cipta* **Material:** - **References:** *Kariadinata, R and Abdurahman, maman. 2012. Basics of Education Statistics. Bandung: Pustaka Setia*	5%
14	Students can collect statistical data through field data collection	can collect statistical data in the field	**Criteria:** formative **Form of Assessment** : Project Results Assessment / Product Assessment	1. Students carry out statistical data collection activities in the 2 X 50 field	1. Students carry out statistical data collection activities in the 2 X 50 field	**Material:** - **References:** *Nuryadi, et al. 2017. Basics of Research Statistics. Yogyakarta: Sibuku Media* **Material:** - **References:** *Arikunto, Suharsimi. 2006. Research Procedures A Practical Approach. Jakarta: Rineka Cipta* **Material:** - **References:** *Kariadinata, R and Abdurahman, maman. 2012. Basics of Education Statistics. Bandung: Pustaka Setia*	5%

15	Students can make reports on the results of activities	can make reports on the results of activities	**Criteria:** formative **Form of Assessment** : Project Results Assessment / Product Assessment	1. Students carry out reporting activities on field data analysis activities 2 X 50	1. Students carry out reporting activities on field data analysis activities 2 X 50	**Material:** - **References:** *Nuryadi, et al. 2017. Basics of Research Statistics. Yogyakarta: Sibuku Media* **Material:** - **References:** *Arikunto, Suharsimi. 2006. Research Procedures A Practical Approach. Jakarta: Rineka Cipta* **Material:** - **References:** *Kariadinata, R and Abdurahman, maman. 2012. Basics of Education Statistics. Bandung: Pustaka Setia*	5%
16	Students can make reports on the results of activities	can make reports on the results of activities	**Criteria:** formative **Form of Assessment** : Project Results Assessment / Product Assessment	UAS Students carry out reporting activities on field data analysis activities 2 X 50	UAS Students carry out reporting activities on field data analysis activities 2 X 50	**Material:** - **References:** *Nuryadi, et al. 2017. Basics of Research Statistics. Yogyakarta: Sibuku Media* **Material:** - **References:** *Arikunto, Suharsimi. 2006. Research Procedures A Practical Approach. Jakarta: Rineka Cipta* **Material:** - **References:** *Kariadinata, R and Abdurahman, maman. 2012. Basics of Education Statistics. Bandung: Pustaka Setia*	15%

Evaluation Percentage Recap: Project Based Learning

No	Evaluation	Percentage
1.	Participatory Activities	22.5%
2.	Project Results Assessment / Product Assessment	60%
3.	Practice / Performance	17.5%
		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.