		Document Code
	Universitas Negeri Surabaya **Vocational Faculty,** **D4 Transportation Study Program**	

SEMESTER LEARNING PLAN

Courses	CODE	Course Family	Credit Weight			SEMESTER	Compilation Date
Transportation Computer Applications	3930102060	Computer application	T=2	P=0	ECTS=3.18	4	April 28, 2023

AUTHORIZATION	SP Developer	Course Cluster Coordinator	Study Program Coordinator
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Learning model	Case Studies

Program Learning Outcomes (PLO)	**PLO study program that is charged to the course**	
	PLO-6	Demonstrate a responsible attitude towards work in their field of expertise independently.
	PLO-9	Able to apply the principles of mechanics, mathematics and engineering concepts to the technical design process, drawing measurement results, and designing in the field of land transportation engineering technology
	PLO-11	Able to internalize ethics, norms and laws in carrying out work.
	Program Objectives (PO)	
	PO - 1	Demonstrate a responsible attitude towards work in their field of expertise independently. Able to carry out work and entrepreneurship in the field of land transportation engineering technology professionally. Able to apply logical, critical, innovative, quality and measurable thinking in identifying, implementing and evaluating independently and coordinating groups to solve technical and non-technical problems and able to communicate verbally and in writing. Able to apply the principles of mechanics, mathematics and engineering concepts to the technical design process, drawing measurement results, and design in the field of land transportation engineering technology. Able to carry out design work, implementation, supervision, documentation of work in the field of land transportation engineering technology according to applicable standards by prioritizing principles occupational and environmental security and safety systems (SMK3L). Able to internalize ethics, norms and laws in carrying out work. Mastering principles, applications, technical references, procedures and work standards (SOP) in laboratories and studios. for KAJI, SPSS, SAP, and VISSIM applications
	PLO-PO Matrix	

P.O	PLO-6	PLO-9	PLO-11
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	Computer application courses study the use of software such as MS Excel, KAJI and SPSS to help process data related to transportation. MS Excel is used to process traffic flow data. The material continues with an introduction to the KAJI application for calculating the performance of road sections, unsignalized intersections and signalized intersections. Students are also introduced to the SPSS application for statistical data processing. The learning method that will be used is a direct learning method followed by practice and presentations

References	Main :	
	1. [1]. -.(1997). Manual Kapasitas Jalan Indonesia. Jakarta: Direktorat Jenderal BinaMarga Departemen Pekerjaan Umum[2].Sujana.(1989).Metoda Statistika. Bandung: Tarsito.[3]. Sugiono. (1994).MetodaPenelitian Administrasi. Bandung: Alfabeta[4].Uyanto, S.S. (2009).Pedoman AnalisisData dengan SPSS. Yogyakarta: Graha Ilmu[5].Wahyono, T. (2008).Belajar Sendiri SPSS16. Jakarta: Elex Media Komputindo	
	Supporters:	

Supporting lecturer	Amanda Ristriana Pattisinai, S.T., M.T. Wahyu Dwi Mulyono, S.Pd., M.Pd. R. Endro Wibisono, S.Pd., M.T. Kusuma Refa Haratama, S.Pd., M.Sc.						
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	1. Students understand the assessment system material for 1 semester. 2. Demonstrates a responsible attitude towards work in his field of expertise independently working on Excel and Corel Draw	Students can explain the main material of assignments and the assessment system for 1 semester.	**Criteria:** - **Form of Assessment** : Participatory Activities, Tests	Lectures 2 X 50		**Materials:** Excel and Corel Draw **Libraries:** *[1]. -.(1997). Indonesian Road Capacity Manual. Jakarta: Directorate General of Highways, Department of Public Works [2]. Sujana. (1989). Statistical Methods. Bandung: Tarsito.[3]. Sugiono. (1994). Administrative Research Methods. Bandung: Alfabeta[4]. Uyanto, SS (2009). Guidelines for Data Analysis with SPSS. Yogyakarta: Graha Ilmu[5]. Wahyono, T. (2008). Self-study SPSS16. Jakarta: Elex Media Komputindo*	5%

2	Students can present flow data in various MS Excel forms	Students can: - Explain various types of data presentation. - Present data using various presentation models	**Criteria:** Full marks are obtained if the application works well as required **Form of Assessment** : Practice / Performance	Discussion lectures and questions and answers 2 X 50		**Material:** flow data in various forms MS Excel **Library:** [1]. -. (1997). Indonesian Road Capacity Manual. Jakarta: Directorate General of Highways, Department of Public Works [2]. Sujana. (1989). Statistical Methods. Bandung: Tarsito.[3]. Sugiono. (1994). Administrative Research Methods. Bandung: Alfabeta[4]. Uyanto, SS (2009). Guidelines for Data Analysis with SPSS. Yogyakarta: Graha Ilmu[5]. Wahyono, T. (2008). Self-Study SPSS16. Jakarta: Elex Media Komputindo	5%
3	Students can present the results of the current enumeration application using MS Excel	Students can: - Present data using MS Excel - Present application results	**Criteria:** Full marks are obtained if the application works well as required **Form of Assessment** : Participatory Activities	2 X 50 practice discussion lecture		**Material:** Presenting data with MS Excel- Presenting application results. **References:** [1]. -.(1997). Indonesian Road Capacity Manual. Jakarta: Directorate General of Highways, Department of Public Works [2]. Sujana. (1989). Statistical Methods. Bandung: Tarsito.[3]. Sugiono. (1994). Administrative Research Methods. Bandung: Alfabeta[4]. Uyanto, SS (2009). Guidelines for Data Analysis with SPSS. Yogyakarta: Graha Ilmu[5]. Wahyono, T. (2008). Self-Study SPSS16. Jakarta: Elex Media Komputindo	5%

4	Students can prepare and organize data using Autocad	Students can:- Explain the function of the Autocad application. Explain the advantages and disadvantages and use of the Autocad application	**Criteria:** Full marks are obtained if you do all the questions correctly **Form of Assessment** : Participatory Activities	2 X 50 practice discussion lecture		**Material:** Autocad application **Library:** *[1]. -. (1997). Indonesian Road Capacity Manual. Jakarta: Directorate General of Highways, Department of Public Works [2]. Sujana. (1989). Statistical Methods. Bandung: Tarsito.[3]. Sugiono. (1994). Administrative Research Methods. Bandung: Alfabeta[4]. Uyanto, SS (2009). Guidelines for Data Analysis with SPSS. Yogyakarta: Graha Ilmu[5]. Wahyono, T. (2008). Self-Study SPSS16. Jakarta: Elex Media Komputindo*	5%
5	Students can prepare and organize data using SAP	Students can:- Arrange data in table form-SAP	**Criteria:** Full marks are obtained if you do all the questions correctly **Form of Assessment** : Participatory Activities	2 X 50 practice discussion lecture			5%
6	Students can be skilled at calculating SAP	Students can:- Explain the SAP calculation procedure	**Criteria:** Full marks are obtained if you do all the questions correctly **Form of Assessment** : Participatory Activities	2 X 50 practice discussion lecture			5%
7	Students can be skilled at calculating SAP	Students can:- Explain the SAP calculation procedure	**Criteria:** Full marks are obtained if you do all the questions correctly **Form of Assessment** : Participatory Activities	2 X 50 practice discussion lecture			5%
8	Midterm exam	-	**Criteria:** - **Form of Assessment** : Project Results Assessment / Product Assessment, Test	- 2 X 50			15%
9	Students can be skilled at calculating the performance of urban roads using the KAJI application	Students can:- Explain the procedure for calculating the performance of urban roads. - Skilled in calculating the performance of urban roads using KAJI	**Criteria:** Full marks are obtained if you do all the questions correctly **Form of Assessment** : Participatory Activities	2 X 50 practice discussion lecture			5%

10	Students can be skilled at calculating the performance of urban roads using the KAJI application	Students can:- Explain the procedure for calculating the performance of urban roads. - Skilled in calculating the performance of urban roads using KAJI	**Criteria:** Full marks are obtained if you do all the questions correctly **Form of Assessment** : Participatory Activities	Discussion lectures and questions and answers 2 X 50			5%
11	Students can be skilled at calculating the performance of unsignalized intersections with the KAJI application	Students can: - Explain the procedure for calculating the performance of unsignalized intersections - Skilled in calculating the performance of unsignalized intersections using KAJI	**Criteria:** Full marks are obtained if you do all the questions correctly **Form of Assessment** : Participatory Activities	Discussion lectures and questions and answers 2 X 50			5%
12	Students can be skilled at calculating the performance of signalized intersections with the KAJI application	Students can: - Explain the procedure for calculating the performance of signalized intersections - Skilled in calculating the performance of signalized intersections using KAJI	**Criteria:** Full marks are obtained if you do all the questions correctly **Form of Assessment** : Participatory Activities	Understand the procedure for calculating the performance of signalized intersections. Skilled in calculating the performance of signalized intersections using KAJI 2 X 50			5%
13	Students can prepare and organize data using SPSS Students can be skilled at calculating correlations using the SPSS application	Students can: - Arrange data in tabular form - Define variables and data - Explain how to fill in data - Insert and delete data and columns - Open data from other applications - Analyze multiple data sources Students can: - Explain the meaning of correlation - Skilled in calculating correlations with applications SPSS	**Criteria:** Full marks are obtained if you do all the questions correctly **Form of Assessment** : Participatory Activities	2 X 50 practice discussion lecture			5%
14	Students can be skilled at calculating single regressions with the SPSS application	Students can: - Explain the meaning of single regression - Skilled in calculating single regression using the SPSS application	**Criteria:** Full marks are obtained if you do all the questions correctly **Form of Assessment** : Participatory Activities	2 X 50 practice discussion lecture			5%
15	Students can be skilled at calculating multiple regression with the SPSS application	Students can: - Explain the meaning of multiple regression - Skilled in calculating multiple regression using the SPSS application	**Criteria:** Full marks are obtained if you do all the questions correctly **Form of Assessment** : Participatory Activities, Practice/Performance	2 X 50 practice discussion lecture			10%

16			**Form of Assessment** : Project Results Assessment / Product Assessment				10%

Evaluation Percentage Recap: Case Study

No	Evaluation	Percentage
1.	Participatory Activities	62.5%
2.	Project Results Assessment / Product Assessment	17.5%
3.	Practice / Performance	10%
4.	Test	10%
		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.