



Universitas Negeri Surabaya
Faculty of Engineering,
Mechanical Engineering Education Undergraduate Study
Program

Document Code

SEMESTER LEARNING PLAN

Courses	CODE	Course Family	Credit Weight	SEMESTER	Compilation Date																																											
Chassis Technology Practice	8320302229		T=0 P=2 ECTS=3.18	4	July 17, 2024																																											
AUTHORIZATION	SP Developer		Course Cluster Coordinator		Study Program Coordinator																																											
		Ir. Wahyu Dwi Kurniawan, S.Pd., M.Pd.																																											
Learning model	Case Studies																																															
Program Learning Outcomes (PLO)	PLO study program that is charged to the course																																															
	Program Objectives (PO)																																															
	PLO-PO Matrix																																															
		P.O																																														
	PO Matrix at the end of each learning stage (Sub-PO)																																															
		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td rowspan="2" style="width: 10%; text-align: center;">P.O</td> <td colspan="16" style="text-align: center;">Week</td> </tr> <tr> <td style="width: 5%; text-align: center;">1</td> <td style="width: 5%; text-align: center;">2</td> <td style="width: 5%; text-align: center;">3</td> <td style="width: 5%; text-align: center;">4</td> <td style="width: 5%; text-align: center;">5</td> <td style="width: 5%; text-align: center;">6</td> <td style="width: 5%; text-align: center;">7</td> <td style="width: 5%; text-align: center;">8</td> <td style="width: 5%; text-align: center;">9</td> <td style="width: 5%; text-align: center;">10</td> <td style="width: 5%; text-align: center;">11</td> <td style="width: 5%; text-align: center;">12</td> <td style="width: 5%; text-align: center;">13</td> <td style="width: 5%; text-align: center;">14</td> <td style="width: 5%; text-align: center;">15</td> <td style="width: 5%; text-align: center;">16</td> </tr> </table>														P.O	Week																1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
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Short Course Description	This course aims to develop students' abilities through the concepts of inspection, analysis and repair of power transfer and vehicle control systems. The power transfer system in question includes: clutch mechanism, transmission system both manual and automatic, propeller shaft and differential. Meanwhile, those related to control systems in this course include: steering systems, suspension systems and brake and wheel systems																																															
References	Main :																																															
	<ol style="list-style-type: none"> 1. A. Aris. 2009. Panduan Praktikum Chasis. 2. PT. Indomobil. 1998. Pedoman Reparasi Chasis dan Sistem Pemindah Tenaga. Jakarta: PT. Indomobil 3. PT. Toyota Astra Mobil. 1981. Pedoman Reparasi Chasis . Jakarta: PT. Toyota Astra Motor 4. VEDC, 2009. Geometri roda. Malang: VEDC Malang 5. VEDC, 2009. Sistem Pemindah Tenaga. Malang: VEDC Malang 																																															
	Supporters:																																															
Supporting lecturer	Muamar Zainul Arif, S.Pd., M.Pd. Bima Anggana Widhiarta Putra, S.Pd., 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 components of power driving systems and types of car frames	Students can explain the function of components and their methods, power transfer, suspension system, braking system, and mention the types of car frames	Criteria: Report format: Title, objectives, tools and materials, theoretical study, work safety, work steps, practicum results data, data analysis, conclusions	Structured practice, brain stomping, scientific learning, direct instruction, problem based instruction 8 X 45			0%
2	Check and repair clutch	Students can inspect and repair manual clutch components according to the SOP and specified time	Criteria: Report format: Title, objectives, tools and materials, theoretical study, work safety, work steps, practicum results data, data analysis, conclusions	Structured practice, brain stomping, scientific learning, direct instruction, problem based instruction 8 X 45			0%
3	Carrying out transmission overhaul 1 (manual)	Students can carry out Transmission Overhaul 1 (manual) according to the SOP within the specified time	Criteria: Report format: Title, objectives, tools and materials, theoretical study, work safety, work steps, practicum results data, data analysis, conclusions	Structured practice, brain stomping, scientific learning, direct instruction, problem based instruction 8 X 45			0%
4	Performing Transmission Overhaul 2 (automatic)	Students can carry out Transmission Overhaul 1 (manual) according to the SOP within the specified time	Criteria: Report format: Title, objectives, tools and materials, theoretical study, work safety, work steps, practicum results data, data analysis, conclusions	Structured practice, brain stomping, scientific learning, direct instruction, problem based instruction 8 X 45			0%
5	Check and repair the profile shaft	Students can carry out and repair propeller shafts according to the SOP within the specified time	Criteria: Report format: Title, objectives, tools and materials, theoretical study, work safety, work steps, practicum results data, data analysis, conclusions	Structured practice, brain stomping, scientific learning, direct instruction, problem based instruction 8 X 45			0%
6	Checking and repairing axles	Students can carry out disassembly, inspection, repair, assembly according to the SOP within the specified time	Criteria: Report format: Title, objectives, tools and materials, theoretical study, work safety, work steps, practicum results data, data analysis, conclusions	Structured practice, brain stomping, scientific learning, direct instruction, problem based instruction 8 X 45			0%

7	Check and repair rear axle	Students can dismantle and repair the rear axle according to the SOP within the specified time	Criteria: Report format: Title, objectives, tools and materials, theoretical study, work safety, work steps, practicum results data, data analysis, conclusions	Structured practice, brain stomping, scientific learning, direct instruction, problem based instruction 3 X 50			0%
8	Check and repair the wheel cylinder brake system	Students can carry out disassembly, inspection, repair, assembly of wheel cylinders according to the SOP within the specified time	Criteria: Report format: Title, objectives, tools and materials, theoretical study, work safety, work steps, practicum results data, data analysis, conclusions	Structured practice, brain stomping, scientific learning, direct instruction, problem based instruction 8 X 45			0%
9	Check and repair the main brake system (master cylinder)	Students can carry out disassembly, inspection, repair, assembly, bedding of the incubation system in accordance with the SOP within the specified time	Criteria: Report format: Title, objectives, tools and materials, theoretical study, work safety, work steps, practicum results data, data analysis, conclusions	Structured practice, brain stomping, scientific learning, direct instruction, problem based instruction 8 X 45			0%
10	UTS	Students can overhaul the transmission system according to the SOP within the specified time	Criteria: A) If the work results are in accordance with the SOP and the specified time = 100. B) If the work is in accordance with the SOP but not in accordance with the specified time = 70. C) If the work is in accordance with the specified time but not in accordance with the SOP = 50. D) If the work does not comply with the SOP and the specified time = 30	8 X 45 performance test			0%
11	Check and repair the steering system	Students can carry out disassembly, inspection, repair, and assembly of the steering system in accordance with the SOP within the specified time	Criteria: Report format: Title, objectives, tools and materials, theoretical study, work safety, work steps, practicum results data, data analysis, conclusions	Structured practice, brain stomping, scientific learning, direct instruction, problem based instruction 8 X 45			0%
12	Check and repair the suspension system	Students can carry out disassembly, inspection, repair, and assembly of suspension systems in accordance with the SOP within the specified time	Criteria: Report format: Title, objectives, tools and materials, theoretical study, work safety, work steps, practicum results data, data analysis, conclusions	Structured practice, brain stomping, scientific learning, direct instruction, problem based instruction 8 X 45			0%

13	Checking and repairing power steering	Students can carry out disassembly, inspection, repair and assembly of the power steering in accordance with the SOP within the specified time	Criteria: Report format: Title, objectives, tools and materials, theoretical study, work safety, work steps, practicum results data, data analysis, conclusions	Structured practice, brain stumping, scientific learning, direct instruction, problem based instruction 8 X 45			0%
14	Dismantling the Toyota Kijang 5K manual transmission	Students can carry out disassembly and reassembly according to the SOP within the specified time	Criteria: Report format: Title, objectives, tools and materials, theoretical study, work safety, work steps, practicum results data, data analysis, conclusions	Structured practice, brain stumping, scientific learning, direct instruction, problem based instruction 8 X 45			0%
15	Dismantling the Toyota Kijang LGX automatic transmission	Students can carry out disassembly and reassembly according to the SOP within the specified time	Criteria: Report format: Title, objectives, tools and materials, theoretical study, work safety, work steps, practicum results data, data analysis, conclusions	Structured practice, brain stumping, scientific learning, direct instruction, problem based instruction 8 X 45			0%
16							0%

Evaluation Percentage Recap: Case Study

No	Evaluation	Percentage
		0%

Notes

- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- Forms of assessment:** test and non-test.
- 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.
- 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.
- Learning materials** are details or descriptions of study materials which can be presented in the form of several main points and sub-topics.
- 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%.
- TM=Face to face, PT=Structured assignments, BM=Independent study.

