	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
Painting Technology Practice	8320303149		T=3	P=0	ECTS=4.77	6	July 18, 2024

AUTHORIZATION	SP Developer	Course Cluster Coordinator	Study Program Coordinator
	.....	.....	Ir. Wahyu Dwi Kurniawan, 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

	P.O

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

Short Course Description	Carrying out practical activities for painting motor vehicles which includes preparation of work objects and materials, mixture composition (mixing), and finishing.
References	**Main :**

1. · Gunadi, M.Pd.2011.Pengecatan Ulang Bodi Kendaraan.Yogyakarta: PT.Citra Aji Parama
2. · Gunadi, M.Pd.2011.Pengenalan Bodi Kendaraan.Yogyakarta: PT.Pustaka Insan Madani
3. · Paint Handbook. 981. Mc Graw-Hill Book Company.
4. · Auto Body Repair. 1975. Duenk Urhams. Brooks
5. Dll...

Supporters:

Supporting lecturer	Saiful Anwar, S.Pd., M.T. Firman Yasa Utama, S.Pd., M.T.

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	Students gain knowledge and understanding of Painting Technology in the form of stages of the process of working on a product, especially motorized vehicles. Use of various supporting tools and tips that are widely used in the industrial world and its developments. The aim is to obtain the best results at an appropriate and affordable economical cost.	1. Explain the initial painting process 2. Develop character behavior, including: honesty, discipline, and responsibility. 3. Develop social skills, including: asking questions, arguing and respecting each other.	**Criteria:** Attendance Percentage Timeliness of Innovation Work	Model: Problem Based Learning / Problem Based Learning Method: Performance, simulation, practical discussion of problem solving, and question and answer Learning strategy: Field Observation, and Scientific 5M (observing, asking, gathering information, associating, communicating) 6 X 50			0%
2	Students gain knowledge and understanding of Painting Technology in the form of stages of the process of working on a product, especially motorized vehicles. Use of various supporting tools and tips that are widely used in the field, industrial world and its developments. The aim is to obtain the best results at an appropriate and affordable economical cost.	1. Initial painting process 2. Developing character behavior, including: honesty, discipline, and responsibility 3. Develop social skills, including: asking questions, arguing and respecting each other.	**Criteria:** Percentage of Attendance, Timeliness of Work, Innovation	Safety tools that must be considered in the painting process Basecoating process (sanding, putty, & epoxy) Initial sanding 100-300/peeling old paint Sanding 300-500 6 X 50			0%
3	Understand the basic concepts of Painting Technology. Know the various types of painting technology. Know the various types of equipment used and their safety tools	1. Explaining the Types and Purposes of Painting 2. Knowledge of Conventional and Automatic Painting 3. Develop character behavior, including: honesty, discipline, and responsibility. 4. Develop social skills, including: asking questions, arguing and respecting each other	**Criteria:** Attendance Percentage Timeliness of Innovation Work	Model: Problem Based Learning / Problem Based Learning Method: Simulation, discussion, practical, problem solving, question and answer Learning strategy: Field Observation, and Scientific 5M (observing, asking, gathering information, associating, communicating) 6 X 50			0%

4	Students gain knowledge and understanding of Painting Technology in the form of stages of the process of working on a product, especially motorized vehicles. Use of various supporting tools and tips that are widely used in the field, industrial world and its developments. The aim is to obtain the best results at an appropriate and affordable economical cost.	1. Plastic based painting 2. Develop character behavior, including: honesty, discipline, and responsibility. 3. Develop social skills, including: asking questions, arguing and respecting each other.	**Criteria:** Attendance Percentage Timeliness of Innovation Work	Model: Problem Based Learning / Problem Based Learning Method: Simulation, discussion, practical, problem solving, question and answer Learning strategy: Field Observation, and Scientific 5M (observing, asking, gathering information, associating, communicating) 6 X 50			0%
5	Students gain knowledge and understanding of Painting Technology in the form of stages of the process of working on a product, especially motorized vehicles. Use of various supporting tools and tips that are widely used in the field, industrial world and its developments. The aim is to obtain the best results at an appropriate and affordable economical cost.	1. Plastic based painting 2. Develop character behavior, including: honesty, discipline, and responsibility. 3. Develop social skills, including: asking questions, arguing and respecting each other.	**Criteria:** Attendance Percentage Timeliness of Innovation Work	Model: Problem Based Learning / Learning Based on Problems Method: Simulation, discussion, practical, problem solving, question and answer Learning strategy: Field Observation, and Scientific 5M (observing, asking, collecting information, associating, communicating) 6 X 50			0%
6	Understand the techniques and practical work of painting motorized vehicles. Be able to use equipment in the painting process	1. Understand the process of making motifs on plastic materials 2. Develop character behavior, including: honesty, discipline, and responsibility. 3. Develop social skills, including: asking questions, arguing and respecting each other.	**Criteria:** Attendance Percentage Timeliness of Innovation Work	Model: Problem Based Learning / Problem Based Learning Method: Simulation, discussion, practical, problem solving, question and answer Learning Strategy: Constructivist, Field Observation, and Scientific 5M (observing, asking, collecting information, associating, communicating) 6 X 50			0%

7	Understand the techniques and practical work of painting motorized vehicles. Be able to use equipment in the painting process	1. Understand the process of making motifs on plastic materials 2. Develop character behavior, including: honesty, discipline, and responsibility. 3. Develop social skills, including: asking questions, arguing and respecting each other.	**Criteria:** Attendance Percentage Timeliness of Innovation Work	Model: Problem Based Learning / Problem Based Learning Method: Simulation, discussion, practical, problem solving, question and answer Learning Strategy: Constructivist, Field Observation, and Scientific 5M (observing, asking, collecting information, associating, communicating) 6 X 50			0%
8	Understand the techniques and practical work of painting motorized vehicles. Able to use equipment in the painting process	1. Understand the top coating process with varnish 2. Develop character behavior, including: honesty, discipline, and responsibility. 3. Develop social skills, including: asking questions, arguing and respecting each other	**Criteria:** Attendance Percentage Timeliness of Innovation Work	Model: Problem Based Learning / Problem Based Learning Method: Simulation, discussion, practical, problem solving, question and answer Learning Strategy: Constructivist, Field Observation, and Scientific 5M (observing, asking, collecting information, associating, communicating) 6 X 50			0%
9	Understand the techniques and practical work of painting motorized vehicles. Able to use equipment in the painting process	1. Understand the top coating process with varnish 2. Develop character behavior, including: honesty, discipline, and responsibility. 3. Develop social skills, including: asking questions, arguing and respecting each other	**Criteria:** Attendance Percentage Timeliness of Innovation Work	Model: Problem Based Learning / Problem Based Learning Method: Simulation, discussion, practical, problem solving, question and answer Learning Strategy: Constructivist, Field Observation, and Scientific 5M (observing, asking, gathering information, associating, communicating) 6 X 50			0%

10	Understand the techniques and practical work of painting motorized vehicles. Able to use equipment in the painting process	1. Understand the painting process on metal materials 2. Develop character behavior, including: honesty, discipline, and responsibility. 3. Develop social skills, including: asking questions, arguing and respecting each other	**Criteria:** Attendance Percentage Timeliness of Innovation Work	Model: Problem Based Learning / Problem Based Learning Method: Simulation, discussion, practical, problem solving, question and answer Learning Strategy: Constructivist, Field Observation, and Scientific 5M (observing, asking, collecting information, associating, communicating) 6 X 50			0%
11	Understand the techniques and practical work of painting motorized vehicles. Able to use equipment in the painting process	1. Understand the painting process on metal materials 2. Develop character behavior, including: honesty, discipline, and responsibility. 3. Develop social skills, including: asking questions, arguing and respecting each other	**Criteria:** Attendance Percentage Timeliness of Innovation Work	Model: Problem Based Learning / Problem Based Learning Method: Simulation, discussion, practical, problem solving, question and answer Learning Strategy: Constructivist, Field Observation, and Scientific 5M (observing, asking, collecting information, associating, communicating) 6 X 50			0%
12	Understand the techniques and practical work of painting motorized vehicles. Able to use equipment in the painting process	1. Understand the painting process on metal materials 2. Develop character behavior, including: honesty, discipline, and responsibility. 3. Develop social skills, including: asking questions, arguing and respecting each other	**Criteria:** Attendance Percentage Timeliness of Innovation Work	Model: Problem Based Learning / Problem Based Learning Method: Simulation, discussion, practical, problem solving, question and answer Learning Strategy: Constructivist, Field Observation, and Scientific 5M (observing, asking, gathering information, associating, communicating 6 X 50			0%

13	Understand the techniques and practical work of painting motorized vehicles. Able to use equipment in the painting process	1. Understand the painting process on metal materials 2. Develop character behavior, including: honesty, discipline, and responsibility. 3. Develop social skills, including: asking questions, arguing and respecting each other	**Criteria:** Attendance Percentage Timeliness of Innovation Work	Model: Problem Based Learning / Problem Based Learning Method: Simulation, discussion, practical, problem solving, question and answer Learning Strategy: Constructivist, Field Observation, and Scientific 5M (observing, asking, collecting information, associating, communicating) 6 X 50			0%
14	Understand the techniques and practical work of painting motorized vehicles. Able to use equipment in the painting process	1. Understand the painting process on metal materials 2. Developing character behavior, including: honesty, discipline, and responsibility 3. Develop social skills, including: asking questions, arguing and respecting each other	**Criteria:** Attendance Percentage Timeliness of Innovation Work	Model: Problem Based Learning / Problem Based Learning Method: Simulation, discussion, practical, problem solving, question and answer Learning Strategy: Constructivist, Field Observation, and Scientific 5M (observing, asking, collecting information, associating, communicating) 6 X 50			0%
15	Understand the techniques and practical work of painting motorized vehicles. Be able to use equipment in the painting process	1. Understand the painting process on metal materials 2. Developing character behavior, including: honesty, discipline, and responsibility 3. Develop social skills, including: asking questions, arguing and respecting each other	**Criteria:** Attendance Percentage Timeliness of Innovation Work	Model: Problem Based Learning / Problem Based Learning Method: Simulation, discussion, practical, problem solving, question and answer Learning Strategy: Constructivist, Field Observation, and Scientific 5M (observing, asking, gathering information, associating, communicating) Learning Experience 6 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.