



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

Document  
Code

## SEMESTER LEARNING PLAN

<b>Courses</b>	<b>CODE</b>	<b>Course Family</b>	<b>Credit Weight</b>	<b>SEMESTER</b>	<b>Compilation Date</b>												
Vehicle Construction and Stability	8320302233		T=2 P=0 ECTS=3.18	6	July 17, 2024												
<b>AUTHORIZATION</b>	<b>SP Developer</b>		<b>Course Cluster Coordinator</b>	<b>Study Program Coordinator</b>													
	.....		.....	Ir. Wahyu Dwi Kurniawan, S.Pd., M.Pd.													
<b>Learning model</b>	<b>Case Studies</b>																
<b>Program Learning Outcomes (PLO)</b>	<b>PLO study program that is charged to the course</b>																
	<b>Program Objectives (PO)</b>																
	<b>PLO-PO Matrix</b>																
		P.O															
	<b>PO Matrix at the end of each learning stage (Sub-PO)</b>																
	P.O	Week															
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
<b>Short Course Description</b>	Understanding of the main components of vehicles, vehicle accidents, body structure development, vehicle dynamics, tire characteristics, vehicle aerodynamic loads, vehicle brake systems, vehicle directional behavior or vehicle stability, vehicle steering systems, and vehicle comfort and safety.																
<b>References</b>	<b>Main :</b>																
	1. Sutantra, I Nyoman. 2010. Teknologi Otomotif. Surabaya: Guna Widya Printing. 2. Buku Pedoman Fakultas Teknik Universitas Negeri Surabaya.																
	<b>Supporters:</b>																
<b>Supporting lecturer</b>	Agung Prijo Budijono, S.T., 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	Explain the main components of a vehicle	<p>1. Students can explain the components of a power generator. 2. Students can explain the chassis frame components. 3. Students can explain body components. 4. Students can explain the components of a power distributor. 5. Students can explain the components of movement influence. 6. Students can explain brake components. 7. Students can explain the suspension system. 8. Students can explain the components of safety and direction stabilization. 9. Students can explain the role of the vehicle industry. 10. Students can explain the impact of accidents on vehicles.</p>	<p><b>Criteria:</b>  1.Activeness in class  2.Compliance with the answer key</p>	<p>Scientific, Discussion, Cooperative, Lecture, Practice questions  2 X 50</p>			0%
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2	Explain the main components of a vehicle	<p>1. Students can explain the components of a power generator. 2. Students can explain the chassis frame components. 3. Students can explain body components. 4. Students can explain the components of a power distributor. 5. Students can explain the components of movement influence. 6. Students can explain brake components. 7. Students can explain the suspension system. 8. Students can explain the components of safety and direction stabilization. 9. Students can explain the role of the vehicle industry. 10. Students can explain the impact of accidents on vehicles.</p>	<p><b>Criteria:</b>  1. Activeness in class  2. Compliance with the answer key</p>	<p>Scientific, Discussion, Cooperative, Lecture, Practice questions  2 X 50</p>			0%
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3	Explain the main components of a vehicle	<ol style="list-style-type: none"> <li>1. Students can explain the components of a power generator.</li> <li>2. Students can explain the chassis frame components.</li> <li>3. Students can explain body components.</li> <li>4. Students can explain the components of a power distributor.</li> <li>5. Students can explain the components of movement influence.</li> <li>6. Students can explain brake components.</li> <li>7. Students can explain the suspension system.</li> <li>8. Students can explain the components of safety and direction stabilization.</li> <li>9. Students can explain the role of the vehicle industry.</li> <li>10. Students can explain the impact of accidents on vehicles.</li> </ol>	<p><b>Criteria:</b></p> <ol style="list-style-type: none"> <li>1. Activeness in class</li> <li>2. Compliance with the answer key</li> </ol>	<p>Scientific, Discussion, Cooperative, Lecture, Practice questions 2 X 50</p>			0%
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6	Explain the main components of a vehicle	<ol style="list-style-type: none"> <li>1. Students can explain the components of a power generator.</li> <li>2. Students can explain the chassis frame components.</li> <li>3. Students can explain body components.</li> <li>4. Students can explain the components of a power distributor.</li> <li>5. Students can explain the components of movement influence.</li> <li>6. Students can explain brake components.</li> <li>7. Students can explain the suspension system.</li> <li>8. Students can explain the components of safety and direction stabilization.</li> <li>9. Students can explain the role of the vehicle industry.</li> <li>10. Students can explain the impact of accidents on vehicles.</li> </ol>	<p><b>Criteria:</b></p> <ol style="list-style-type: none"> <li>1. Activeness in class</li> <li>2. Compliance with the answer key</li> </ol>	<p>Scientific, Discussion, Cooperative, Lecture, Practice questions 2 X 50</p>			0%
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8	MIDTERM EXAM	<p>1. Students can explain the components of a power generator. 2. Students can explain the chassis frame components. 3. Students can explain body components. 4. Students can explain the components of a power distributor. 5. Students can explain the components of movement influence. 6. Students can explain brake components. 7. Students can explain the suspension system. 8. Students can explain the components of safety and direction stabilization. 9. Students can explain the role of the vehicle industry. 10. Students can explain the impact of accidents on vehicles.</p>	<p><b>Criteria:</b> Compliance with the answer key</p>	<p>Closed Exam 2 X 50</p>			0%
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9	Explain the main components of a vehicle	<ol style="list-style-type: none"> <li>1. Students can explain the components of a power generator.</li> <li>2. Students can explain the chassis frame components.</li> <li>3. Students can explain body components.</li> <li>4. Students can explain the components of a power distributor.</li> <li>5. Students can explain the components of movement influence.</li> <li>6. Students can explain brake components.</li> <li>7. Students can explain the suspension system.</li> <li>8. Students can explain the components of safety and direction stabilization.</li> <li>9. Students can explain the role of the vehicle industry.</li> <li>10. Students can explain the impact of accidents on vehicles.</li> </ol>	<p><b>Criteria:</b></p> <ol style="list-style-type: none"> <li>1. Activeness in class</li> <li>2. Compliance with the answer key</li> </ol>	<p>Scientific, Discussion, Cooperative, Lecture, Practice questions 2 X 50</p>			0%
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12	Explain the main components of a vehicle	<ol style="list-style-type: none"> <li>1. Students can explain the components of a power generator.</li> <li>2. Students can explain the chassis frame components.</li> <li>3. Students can explain body components.</li> <li>4. Students can explain the components of a power distributor.</li> <li>5. Students can explain the components of movement influence.</li> <li>6. Students can explain brake components.</li> <li>7. Students can explain the suspension system.</li> <li>8. Students can explain the components of safety and direction stabilization.</li> <li>9. Students can explain the role of the vehicle industry.</li> <li>10. Students can explain the impact of accidents on vehicles.</li> </ol>	<b>Criteria:</b> <ol style="list-style-type: none"> <li>1. Activeness in class</li> <li>2. Compliance with the answer key</li> </ol>	Scientific, Discussion, Cooperative, Lecture, Practice questions 2 X 50			0%
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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** abilities in the process and student learning outcomes are specific and measurable statements that identify the abilities 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.



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.