

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

Document Code

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		SEME	51	E	K I	LE	A	Kľ	יווע	١G	, P	'LA	IN						
Courses		CODE			Course Family				Credit Weight					SE	MES	TER	Com	pilation	n
Jigs and Fixt	8320302271						T=2	=2 P=0 ECTS=3.18		3	6		July	18, 202	4				
AUTHORIZATION		SP Developer	SP Developer					Course Cluster Coordinator					Stu	Study Program Coordinator					
														lr.	Ir. Wahyu Dwi Kurniawan, S.Pd., M.Pd.				
Learning model	Case Stud	es																	
Program Learning	PLO stud	dy program that is charged to the course																	
Outcomes	PLO-5	Have social competence and personality competence in mechanical engineering education																	
(PLO)	PLO-8	Able to carry out maintenance and repairs in the automotive engineering field (automotive concentration) or able to operate various production equipment and machines in the manufacturing sector (production concentration)																	
	PLO-10	Have an understanding of mathematics and basic mechanical engineering																	
	Program	rogram Objectives (PO)																	
	PO - 1	Understand the basic concepts of Jig and fixture																	
PO - 2 Students can explain or understand the elements of jigs an							and	fixture	res										
PO - 3 Students know and understand Jigs and Fixtures in the welding p						ng pro	cess												
	Students can expl	explain or understand Jigs and Fixtures on various production machines																	
PLO-PO Matrix																			
		ī																	
P.O PLO-5 PLO-8 PLO-10)-10														
		PO-1																	
		PO-2																	
		PO-3																	
	PO-4																		
	PO Matrix at the end of each learning stage (Sub-PO)																		
		P.O									W	eek							
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
		PO-1																	
		PO-2																	
		PO-3																	
		PO-4																	

Short Course Description The Jig and Fixture course is designed to provide an in-depth understanding of the role and function of production tools, especially jigs and fixtures, in the manufacturing process. This course equips students to know and understand: Jig and Fixture Concept, Role, function and advantages of using Jig and Fixture, Components of Jig and Fixture, Clamping System, Clamping styles, Welding Jig and Fixture, Turning Jig and Fixture, Jig and Drilling Fixtures, Milling Jigs and Fixtures, as well as other machining. References Main: 1. 1. Henriksen, E. K. (1973). Jig and fixture design manual. Industrial Press In 2. Hoffman, E. (2012). Jig and fixture design. Cengage Learning.

- 1. 3. Antono Djoyoatmojo, tth, Pengenalan Jig dan Fixture, Bandung : POLMAN
 - 2. 4. Antono Djoyoatmojo, tth, Elemen Jig dan Fixture, Bandung: POLMAN
 - 3. 5. Otto Purnawarman, tth, Jig dan Fixture Pengelasan, Bandung : POLMAN
 - 6. Eandry Sovian dan Yudi Y. Effendi, tth, Pencekaman Benda Kerja Pada Fixture., Bandung: POLMAN
 - 5. 7. Otto Purnawarman, Tth, Jig Fixture Frais, Bandung: POLMAN

Supporting lecturer

Ali Hasbi Ramadani, S.Pd., M.Pd.

Week-	Final Evaluation abilities of each		valuation	Le Stu	Help Learning, earning methods, dent Assignments, Estimated time]	Learning materials	Assessment	
week-	learning stage (Sub-PO)	Indicator	Criteria & Form	Offline (offline)	Online (<i>online</i>)	References]	Weight (%)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
1		"1.1. Able to explain the basic concepts of jig and fixture	Form of Assessment : Participatory Activities	100			0%	
2							0%	
3							0%	
4							0%	
5							0%	
6							0%	
7							0%	
8							0%	
9							0%	
10							0%	
11							0%	
12							0%	
13							0%	
14							0%	
15							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.
- 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.
- 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.