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

Document Code

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Courses		COD	CODE		Cou	Course Family		Cred	Credit Weight			SEMES	STER	Com Date	pilation	
Engineering Mechanics I			8320	8320302070				T=2 P=0 ECTS=3.18		3.18	2		July :	18, 2024		
AUTHORIZATION		SP D	SP Developer			Course Cluster Coordinator			Study Program Coordinator							
									Ir. Wahyu Dwi Kurniawan, S.Pd., M.Pd.							
Learning model Case Studies																
Program Learning		PLO study program that is charged to the course														
Outcom (PLO)	es	Program Ob	•	PO)												
,		PLO-PO Mat	trix													
			P.O													
		PO Matrix at the end of each learning stage (Sub-PO)														
			P.O	•					We	eek						
				1	2 3	4 5	6	7	8 9	10	11	12	13	14	15	16
Short Course Description		Understand the opposite direct point. Underst for more than requirements Understand he understand the first point of the control of the contr	ctions at one tand the rest a 2 forces a for balancow to deter	e captu sultant at one ce of a rmine t	ire point. U of 2 force capture pe a plane s the center	Understa s that for oint. Und style arra of gravit	nd the rm an derstar angem ty of fl	result arbitra nding \ nent. \	ant of 2 ry angl /arigno Jndersi	2 force le at o on's Ma tand t	s that for ne captu oment th he requi	m an re po eorer reme	angle of the control	of 900 erstan erstand baland	at one d the I the g e tec	e capture resultant graphical chniques.
References		Main:														
		<ol> <li>S. Timosenko, DH Young. 1990. Mekanika Teknik, Jakarta, Penerbit Erlangga</li> <li>Ferdinand P. Bear dan E.Russell Johnston, Jr. 1987. Statika. (Mekanika untuk Insinyur), Erlangga Jakarta</li> <li>Soenarko. 1988. Mekanika Kekuatan Material 1. Surabaya: Institut Teknologi Sepuluh Nopember</li> </ol>								carta						
		Supporters:														
Support lecturer		Dr. Djoko Suw Heru Arizal, S		M.Pd.												
Week-	of e	Final abilities of each earning stage		Evaluation			Lear Studer		Help Learning, arning methods, dent Assignments, Estimated time]			Learning materials [	Assessment Weight (%)			
	(Sub-PÖ)		Indicat	or	Criteria d	& Form		line ( line )	C	Online	( online	)	]			

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1	Know what is meant by forces on a flat plane	Able to determine the resultant of two or more forces using vectors. Able to calculate the resultant of two or more forces using vectors	Criteria: null	Lectures, discussions and questions and answers 2 X 50		0%
2	Continuing Meeting 1	Able to calculate the magnitude of the resultant of more than 2 forces graphically Analyze the magnitude of the resultant and two forces Describe the resultant of more than 2 forces	Criteria: null	Lectures, discussions and questions and answers 2 X 50		0%
3	Continue meeting 2	Decomposing forces in components. Determining the perpendicular components of a force, Adding forces by adding	Criteria: null	Lectures, discussions and questions and answers 2 X 50		0%
4	Know about the resultant forces in space	Understand the concept of force in the field of space. Describe the components of force in the field of space	Criteria: null	Lectures, discussions and questions and answers 2 X 50		0%
5	Continuing the 4th Meeting	Understand the concept of force in the field of space. Describe the components of force in the field of space	Criteria: null	Lectures, discussions and questions and answers 2 X 50		0%
6	Continuing the 5th Meeting	Understand the concept of force in the field of space. Describe the components of force in the field of space	Criteria: null	Lectures, discussions and questions and answers 2 X 50		0%
7	MKnowing the center of gravity of plates and composites	Understand the concept of center of gravity of planes and lines. Understand the concept of center of gravity of planes and lines. Understand the center of gravity of plates and composites	Criteria: null	Lectures, discussions and questions and answers 2 X 50		0%

8	Know the center of gravity of plates and composites	Understand the concept of center of gravity of planes and lines. Understand the concept of center of gravity of planes and lines. Understand the center of gravity of plates and composites	Criteria: null	Lectures, discussions and questions and answers 2 X 50		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
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## 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.
- 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.