

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

Document Code

Courses			CODE		C	Course Family		Credit Weight		SE	SEMESTER		Compilation Date				
Learning strategies			8320302216	20302216 Study Progr Elective Co		am ırses	s	T=2	P=0	ECTS=3.1	В	2		nuary 17			
AUTHORIZA <sup>*</sup>	ΓΙΟΝ		SP Develop	er					C	Cours	e Clu	ster C	oordinator	Stu	Study Program Coordinator		
			Heru Arizal, S.Pd., M.M., M.Pd.; Dr. Dewanto, M.Pd. ; Dr. Theodorus Wiyanto Wibowo, M.Pd. ;				С	Dr. Dewanto, M.Pd.			I	Ir. Wahyu Dwi Kurniawan, S.Pd., M.Pd.					
Learning model	Project Based	l Learni	ng														
Program Learning	PLO study p	rogram	which is ch	arge	d to	the c	cour	se									
Outcomes (PLO)	PLO-6		to apply and ighout life	analy	ze pe	edago	gical	l com	pete	ncies	in me	echanio	cal engineer	ing ed	lucation co	ntinuc	usly
	Program Obj	ectives	(PO)														
	PO - 1		to utilize scie ng problems	nce a	nd te	chnol	logy i	in the	field	d of le	arninç	g strate	egies, and a	ble to	adapt to s	ituatio	ns faced
	PO - 2	probl	er theoretical em solving		•								•				•
	PO - 3	Able vario	to make stra us alternative	tegic solut	decis ions	sions in the	base field	ed on of lea	info arnin	rmation	on and ategie	d data s	analysis, a	nd pro	ovide guid	ance i	n selecti
	PO - 4	Resp	onsible for or	ie's o	wn w	ork aı	nd ca	an be	give	n res	ponsil	oility fo	r achieving	group	work resu	lts	
	PLO-PO Mati	rix															
			P.O		Ρl	.O-6											
			PO-1														
			PO-2														
			PO-3														
			PO-4														
								,									
	PO Matrix at	the end	d of each lea	ırnin	g sta	age (	Sub-	PO)									
			P.O									Week					
				1	2	3	4	5	6	7	8	9	10 11	12	13 14	15	16
		P	0-1														
		P	0-2														
		P	O-3														
		P	0-4														

- 1. Eggen, Paul dan Don Kauchak. 2012. Strategi dan Model Pembelajaran. Edisi 6. Penerjemah: SatrioWahono. Jakarta: PT Indeks.
- Zaini, Hisyam, Bermawy Munthe, Sekar Ayu Aryani. 2007. Strategi Pembelajaran Aktif. Yogyakarta: CTSD.
- 3. Mustaji. 2009. Desain Pembelajaran. Surabaya: University Press.
- 4. Nur, Mohamad dan I Ketut Budayasa. 1998. Teori Pembelajaran Sosial dan Teori Pembelajaran Perilaku. IKIP Surabaya.
- 5. Nur, Mohamad. 2011. Strategi-Strategi Belajar. Unesa: PSMS.
- Nur, Mohamad. 2011. Model Pembelajaran Langsung. Surabaya: PSMS Unesa.
- 7. Nur, Mohamad. 2011. Model Pembelajaran Kooperatif. Unesa: PSMS.
- 8. Nur, Mohamad. 2011. Model pembelajaran Berbasis Masalah. Unesa: PSMS.

## Supporters:

- 1. Nurlaela, Luthfiyah dan Euis Ismayati. 2015. Strategi Belajar Berpikir Kreatif. Yogyakarta: Penerbit Ombak.
- 2. Nur, Mohamad dan Prima Retno Wikandari. 2004. Pengajaran Berpusat pada Siswa dan Pendekatan Konstruktivis dalam Pengajaran. Surabaya: PSMS Unesa.

Help Learning,

## Supporting lecturer

Dr. Dewanto, M.Pd.

Dr. Theodorus Wiyanto Wibowo, M.Pd. Heru Arizal, S.Pd., M.M., M.Pd. Rachmad Syarifudin Hidayatullah, S.Pd., M.Pd.

Week-	stage		aluation	Lear Stude	elp Learning, rning methods, nt Assignments, stimated time]	Learning materials	Assessment Weight (%)	
	(Sub-PO)	Indicator	Criteria & Form	Offline ( offline )	Online ( online )	[ References ]	3 ( )	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
1	Students are able to describe professional improvement and optimize the role of teachers in the learning process	Describe professional improvement and optimize the role of teachers in the learning process	Criteria:     according to the     assessment rubric  Form of     Assessment :     Participatory     Activities, Tests	Lectures, discussions, questions and answers, exercises and assignments 2 X 50	Lectures, discussions, questions and answers, exercises and assignments 2 X 50	Material: The role of the teacher in learning Reader: Nur, Mohamad and I Ketut Budayasa. 1998. Social Learning Theory and Behavioral Learning Theory. IKIP Surabaya.	5%	
2	Students are able to identify teacher skills	Identifying teacher skills	Criteria:     according to the     assessment rubric  Forms of     Assessment :     Participatory     Activities, Portfolio     Assessment, Tests	Lectures, discussions, questions and answers, exercises and assignments 2 X 50	Lectures, discussions, questions and answers, exercises and assignments	Material: Teacher skills Reader: Nur, Mohamad and I Ketut Budayasa. 1998. Social Learning Theory and Behavioral Learning Theory. IKIP Surabaya	5%	
3	Students are able to identify teacher skills	Identifying teacher skills	Criteria: according to the assessment rubric  Forms of Assessment : Participatory Activities, Portfolio Assessment, Tests	Lectures, discussions, questions and answers, exercises and assignments 2 X 50	Lectures, discussions, questions and answers, exercises and assignments	Material: Teacher skills Reader: Nur, Mohamad and I Ketut Budayasa. 1998. Social Learning Theory and Behavioral Learning Theory. IKIP Surabaya	5%	
4	Students are able to identify factors that influence the learning system and learning system components	Identify factors that influence the learning system and learning system components	Criteria: according to the assessment rubric  Forms of Assessment : Participatory Activities, Portfolio Assessment, Tests	Lectures, discussions, questions and answers, exercises and assignments 2 X 50	Lectures, discussions, questions and answers, exercises and assignments 2 X 50	Material: Factors that influence the learning system Reader: Zaini, Hisyam, Bermawy Munthe, Sekar Ayu Aryani. 2007. Active Learning Strategy. Yogyakarta: CTSD.	5%	

5	Students are able to describe the basic concepts of teaching and the need for a teaching paradigm	Describe the basic concepts of teaching and the need for a paradigm regarding teaching	Criteria: according to the assessment rubric  Form of Assessment : Participatory Activities	Lectures, discussions, questions and answers, exercises and assignments 2 X 50	Lectures, discussions, questions and answers, exercises and assignments 2 X 50	Material: Teaching paradigms References: Eggen, Paul and Don Kauchak. 2012. Learning Strategies and Models. Edition 6. Translator: SatrioWahono. Jakarta: PT Index.	5%
6	Students are able to describe learning strategies, methods and approaches as well as the principles of using learning strategies	Describe learning strategies, methods and approaches as well as the principles of using learning strategies	Criteria: a. Conformity with reporting format b. Results of analysis of articles read c. Conclusions and suggestions prepared a. Presence b. Activeness in questions and answers, seriousness in attending lectures  Form of Assessment: Participatory	Lectures, discussions, questions and answers, exercises and assignments 2 X 50	Lectures, discussions, questions and answers, exercises and assignments 2 X 50	Material: Principles of learning strategies References: Nur, Mohamad. 2011. Learning Strategies. Unesa: PSMS.	5%
7	Students are able to describe learning strategies, methods and approaches as well as the principles of using learning strategies (Continued)	Describe learning strategies, methods and approaches as well as the principles of using learning strategies	Activities  Criteria: a. Conformity with reporting format b. Results of analysis of articles read c. Conclusions and suggestions prepared a. Presence b. Activeness in questions and answers, seriousness in attending lectures  Form of Assessment: Participatory Activities	Lectures, discussions, questions and answers, exercises and assignments 2 X 50	Lectures, discussions, questions and answers, exercises and assignments 2 X 50	Material: Principles of learning strategies References: Nur, Mohamad. 2011. Learning Strategies. Unesa: PSMS.  Material: Principles of learning strategies References: Eggen, Paul and Don Kauchak. 2012. Learning Strategies and Models. Edition 6. Translator: SatrioWahono. Jakarta: PT Index.	5%
8	Sub Summative Exam (USS)	Sub Summative Exam (USS)	Criteria: Compliance with the answer key  Form of Assessment: Participatory Activities	Sub Summative Exam (USS) 2 X 50	Sub Summative Exam (USS) 2 X 50	Material: Meeting material 1 to 7 Reader: Eggen, Paul and Don Kauchak. 2012. Learning Strategies and Models. Edition 6. Translator: SatrioWahono. Jakarta: PT Index.	15%

9	Students are able to describe student activity-oriented learning (PBAS)	Describe student activity- oriented learning (PBAS)	Criteria: according to the assessment rubric  Form of Assessment : Participatory Activities, Tests	Lectures, discussions, questions and answers, exercises and assignments 2 X 50	Lectures, discussions, questions and answers, exercises and assignments 2 X 50	Material: student activity- oriented learning (PBAS) References: Nur, Mohamad and Prima Retno Wikandari. 2004. Student- Centered Teaching and Constructivist Approaches to Teaching. Surabaya: PSMS Unesa.  Material: Student activity- oriented learning (PBAS) Reference: Nur, Mohamad. 2011. Learning Strategies. Unesa: PSMS.	5%
10	Students are able to apply learning methods and utilize media and learning resources.	Applying learning methods and utilizing media and learning resources.	Criteria: according to the assessment rubric  Form of Assessment : Participatory Activities	Lectures, discussions, questions and answers, exercises and assignments 2 X 50	Lectures, discussions, questions and answers, exercises and assignments 2 X 50	Material: Use of media and learning resources Reader: Mustaji. 2009. Learning Design. Surabaya: University Press.	5%
11	Students are able to describe concepts, principles and procedures for using expository and inquiry learning strategies	Describe the concepts, principles and procedures for using expository and inquiry learning strategies	Criteria: according to the assessment rubric  Form of Assessment : Participatory Activities, Tests	Lectures, discussions, questions and answers, exercises and assignments 2 X 50	Lectures, discussions, questions and answers, exercises and assignments 2 X 50	Material: expository and inquiry learning strategies References: Eggen, Paul and Don Kauchak. 2012. Learning Strategies and Models. Edition 6. Translator: SatrioWahono. Jakarta: PT Index.  Material: expository and inquiry learning strategies References: Nur, Mohamad. 2011. Learning Strategies. Unesa: PSMS.	5%

12	Students are able to describe the basic concepts and characteristics of problem-based learning strategies (SPBM)	Describe the basic concepts and characteristics of problem- based learning strategies (SPBM)	according to the assessment rubric discussions, questions and answers, exercises and answers, exercises and answers are accompanied.		answers, exercises and assignments	Material: Problem- based learning strategy (SPBM) Reference: Nur, Mohamad. 2011. Problem Based Learning Model. Unesa: PSMS.	5%
						Material: Problem- based learning strategies (SPBM) References: Eggen, Paul and Don Kauchak. 2012. Learning Strategies and Models. Edition 6. Translator: SatrioWahono. Jakarta: PT Index.	
13	Students are able to describe the nature, basic concepts and thinking skills in learning strategies to improve thinking skills (SPPKB)	Describe the nature, basic concepts and thinking skills in learning strategies to improve thinking skills (SPPKB)	Criteria: according to the assessment rubric  Form of Assessment : Participatory Activities	Lectures, discussions, questions and answers, exercises and assignments 2 X 50	Lectures, discussions, questions and answers, exercises and assignments 2 X 50	Material: learning strategies to improve thinking skills (SPPKB) References: Nurlaela, Luthfiyah and Euis Ismayati. 2015. Creative Thinking Learning Strategies. Yogyakarta: Ombak Publishers.	5%
14	Students are able to describe cooperative learning strategies (SPK)	Describe cooperative learning strategies (SPK)	Criteria: according to the assessment rubric  Form of Assessment : Participatory Activities, Tests	Lectures, discussions, questions and answers, exercises and assignments 2 X 50	Lectures, discussions, questions and answers, exercises and assignments 2 X 50	Material: Cooperative learning strategies (SPK) References: Nur, Mohamad. 2011. Cooperative Learning Model. Unesa: PSMS.	5%
15	Students are able to describe contextual learning strategies (CTL)	Describe contextual learning (CTL) strategies	Criteria: according to the assessment rubric  Form of Assessment : Participatory Activities, Tests	Lectures, discussions, questions and answers, exercises and assignments 2 X 50	Lectures, discussions, questions and answers, exercises and assignments	Material: contextual learning strategies (CTL) Reference: Mustaji. 2009. Learning Design. Surabaya: University Press.	5%

16	Summative Exam (US)	Summative Exam (US)	Criteria: Compliance with the answer key  Form of Assessment: Participatory Activities	Summative Exam (US) 2 X 50	Summative Exam (US) 2 X 50	Materials: All materials Readers: Eggen, Paul and Don Kauchak. 2012. Learning Strategies and Models. Edition 6. Translator: SatrioWahono. Jakarta: PT Index.	25%
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**Evaluation Percentage Recap: Project Based Learning** 

No	Evaluation	Percentage
1.	Participatory Activities	85.01%
2.	Portfolio Assessment	5.01%
3.	Test	20.01%
		100%

## 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%.
- ${\bf 12.}\ \ {\sf TM}{\sf =Face}\ to\ face,\ {\sf PT}{\sf =Structured}\ assignments,\ {\sf BM}{\sf =Independent}\ study.$