	Universitas Negeri Surabaya Faculty of Mathematics and Natural Sciences Undergraduate Chemistry Education Study Program	Document Code

SEMESTER LEARNING PLAN

Courses	CODE	Course Family	Credit Weight			SEMESTER	Compilation Date
Development of Teaching Materials	8420402291	Compulsory Study Program Subjects	T=2	P=0	ECTS=3.18	2	January 31, 2022

AUTHORIZATION	SP Developer	Course Cluster Coordinator	Study Program Coordinator
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Learning model	**Project Based Learning**	
Program Learning Outcomes (PLO)	**PLO study program which is charged to the course**	
	PLO-5	Able to make decisions based on data/information in order to complete tasks that are their responsibility and evaluate performance that has been carried out both individually and in groups, has an entrepreneurial spirit with an environmental perspective (CPL 7)
	PLO-9	Mastering the principles of K3 (Work Safety and Security), managing the laboratory and using its equipment as well as how to operate chemical instruments (CPL 3)
	PLO-12	Able to demonstrate chemical pedagogical knowledge about designing, implementing and evaluating chemistry learning (CPL 2)
	Program Objectives (PO)	
	PO - 1	Utilizing learning resources and ICT to support the implementation and implementation of the development of certain learning media. (utilization of ICT)
	PO - 2	Master the meaning, types/classification, functions, basics of learning media development and be able to apply them in learning according to learning strategies
	PO - 3	Design and produce learning media by utilizing the surrounding environment (contextual) and/or ICT-based
	PO - 4	Have a responsible attitude in developing learning media according to the field of study
	PLO-PO Matrix	

P.O	PLO-5	PLO-9	PLO-12
PO-1			
PO-2			
PO-3			
PO-4			

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
PO-1																
PO-2																
PO-3																
PO-4																

Short Course Description	Study of the meaning, types/classification, functions, basics of developing teaching materials, as well as being able to select, design and produce teaching materials by utilizing the surrounding environment (contextual) and ICT	
References	**Main :**	

1. Depdiknas. 2005. Pedoman Pengembangan Buku Pelajaran . Jakarta: Pusat Perbukuan
2. Heinich, R., Molenda. 1999. Instructional Media and Technologies for Learning . USA: Prentice Hall
3. Dinas Pendidikan Provinsi Jabar. 2005. Penyusunan Naskah Bahan Ajar Teori dan Praktek . Bandung: Balai Pengembangan Teknologi Pendidikan
4. Fenrich, P. 1997. Practical Guidelines For Creating Instructional Multimedia Application . USA:Harcourt Brace College Publisher
5. Sadiman. 2009. Media Pendidikan . Jakarta
6. Smaldino, S.E., Deborah L.L., and James D.R., 2011. Instructional Technology and Media for Learning: Teknologi Pembelajaran dan Media untuk Belajar . Jakarta: Kencana

Supporters:	

Supporting lecturer	Prof. Dr. Achmad Lutfi, M.Pd. Dr. Sukarmin, M.Pd. Dian Novita, S.T., M.Pd. Bertha Yonata, S.Pd., M.Pd.

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	Understand the basics of planning and developing science (chemistry) learning media in general	Explains the meaning, types/classification, functions, basics of learning media development	**Criteria:** Able to explain the meaning, types/classification, functions, basics of learning media development **Form of Assessment** : Participatory Activities	Discussion 2 x 50	Discussion 2 x 50	**Material:** Learning Media **Library:** *Ministry of National Education. 2005. Textbook Development Guidelines. Jakarta: Book Center* **Material:** Learning Media **References:** *Heinich, R., Molenda. 1999. Instructional Media and Technologies for Learning. USA: Prentice Hall*	1%
2	Mastering the meaning, types/classification, functions, basics of learning media development	Determine the type of media to be applied in learning	**Criteria:** Able to determine the type of media to be applied in learning **Form of Assessment** : Participatory Activities	Discussion and Presentation 2 x 50	Discussion and Presentation 2 x 50	**Material:** Learning Media **Library:** *Sadiman. 2009. Educational Media. Jakarta*	2%
3	Understand the basics of planning and developing science (chemistry) learning media in general	Explains the basics of planning and developing science (chemistry) learning media in general	**Criteria:** Able to explain the basics of planning and developing science (chemistry) learning media in general **Form of Assessment** : Participatory Activities	Discussion and presentation 2 x 50	Discussion and Presentation 2 x 50	**Material:** Learning Media (teaching materials) **Library:** *West Java Provincial Education Office. 2005. Preparation of Manuscripts for Theory and Practice Teaching Materials. Bandung: Center for Educational Technology Development*	2%
4	Designing learning media by utilizing the surrounding environment (contextual)	Create a learning media design by utilizing the surrounding environment (contextual)	**Criteria:** Able to create learning media designs by utilizing the surrounding environment (contextual)	1. Basic questions 2. Design a product plan 3. Develop a manufacturing schedule 4. Monitor project activity and progress 2 x 50	1. Basic questions 2. Design a product plan 3. Develop a manufacturing schedule 4. Monitor project activity and progress 2 x 50	**Material:** Learning Media (teaching materials) **Library:** *Sadiman. 2009. Educational Media. Jakarta*	4%

5	Designing learning media by utilizing the surrounding environment (contextual)	Create a learning media design by utilizing the surrounding environment (contextual)	**Criteria:** Able to create learning media designs by utilizing the surrounding environment (contextual)	1. Basic questions 2. Design a product plan 3. Develop a manufacturing schedule 4. Monitor project activity and progress 2 x 50	1. Basic questions 2. Design a product plan 3. Develop a manufacturing schedule 4. Monitor project activity and progress 2 x 50	**Material:** Learning Media (teaching materials) **Library:** *Sadiman. 2009. Educational Media. Jakarta*	5%
6	Producing learning media by utilizing the surrounding environment (contextual)	Creating learning media by utilizing the surrounding environment (contextual)	**Criteria:** Able to create learning media by utilizing the surrounding environment (contextual) **Form of Assessment** : Project Results Assessment / Product Assessment	Monitor the activity and progress of the 2 x 50 project	Monitor the activity and progress of the 2 x 50 project	**Material:** Learning Media (teaching materials) **Library:** *Ministry of National Education. 2005. Textbook Development Guidelines. Jakarta: Book Center*	10%
7	Presenting produced contextual learning media	Exhibiting the learning media produced	**Criteria:** Able to exhibit the learning media produced	1. Test the results 2. Evaluate the learning experience 2 x 50	1. Test the results 2. Evaluate the learning experience 2 x 50	**Material:** Learning Media (teaching materials) **Library:** *Sadiman. 2009. Educational Media. Jakarta*	10%
8	1. Mastering the meaning, types/classification, functions, basics of learning media development 2. Able to apply in learning according to learning strategies 3. Understand the basics of planning and developing science (chemistry) learning media in general	1. Explains the meaning, types/classification, functions, basics of learning media development 2. Determine the type of media to be applied in learning 3. Explains the basics of planning and developing science (chemistry) learning media in general	**Criteria:** 1. Able to explain the meaning, types/classification, functions, basics of learning media development 2. Able to determine the type of media to be applied in learning 3. Able to explain the basics of planning and developing science (chemistry) learning media in general	Written Test 2 x 50	Written Test 2 x 50	**Material:** Learning Media (teaching materials) **Library:** *Sadiman. 2009. Educational Media. Jakarta*	10%
9	Designing ICT-based learning media	Designing ICT-based learning media	**Criteria:** Able to design ICT-based learning media	1. Basic questions 2. Design a product plan 3. Develop a manufacturing schedule 4. Monitor project activity and progress 2 x 50	1. Basic questions 2. Design a product plan 3. Develop a manufacturing schedule 4. Monitor project activity and progress 2 x 50	**Material:** Learning Media (Video media) **References:** *Heinich, R., Molenda. 1999. Instructional Media and Technologies for Learning. USA: Prentice Hall*	2%
10	Designing ICT-based learning media	Designing ICT-based learning media	**Criteria:** Able to design ICT-based learning media **Form of Assessment** : Portfolio Assessment	1. Basic questions 2. Design a product plan 3. Develop a manufacturing schedule 4. Monitor project activity and progress 2 x 50	1. Basic questions 2. Design a product plan 3. Develop a manufacturing schedule 4. Monitor project activity and progress 2 x 50	**Material:** Learning Media (Video media) **References:** *Heinich, R., Molenda. 1999. Instructional Media and Technologies for Learning. USA: Prentice Hall*	2%

11	Producing ICT-based learning media	Designing ICT-based learning media	**Criteria:** Able to produce ICT-based learning media **Form of Assessment** : Project Results Assessment / Product Assessment	1. Monitor the activity and development of the 2 x 50 project	1. Monitor the activity and development of the 2 x 50 project	**Material:** Learning Media (Video media) **References:** *Heinich, R., Molenda. 1999. Instructional Media and Technologies for Learning. USA: Prentice Hall*	10%
12	1.Producing ICT-based learning media 2.Exhibiting the ICT Media produced	1.Producing ICT-based learning media 2.Exhibiting ICT-based learning media produced	**Criteria:** 1.Able to produce ICT-based learning media 2.Mampi Exhibits the ICT-based learning media produced **Form of Assessment** : Project Results Assessment / Product Assessment	1. Test the results 2. Evaluate the learning experience 2 x 50	1. Test the results 2. Evaluate the learning experience 2 x 50	**Material:** Learning Media (Video media) **References:** *Heinich, R., Molenda. 1999. Instructional Media and Technologies for Learning. USA: Prentice Hall*	10%
13	Designing ICT-based learning media	Designing ICT-based learning media	**Criteria:** Able to design ICT-based learning media	1. Basic questions 2. Design a product plan 3. Develop a manufacturing schedule 4. Monitor project activity and progress 2 x 50	1. Basic questions 2. Design a product plan 3. Develop a manufacturing schedule 4. Monitor project activity and progress 2 x 50	**Material:** Interactive Learning Media **References:** *Heinich, R., Molenda. 1999. Instructional Media and Technologies for Learning. USA: Prentice Hall*	3%
14	Designing ICT-based learning media	Designing ICT-based learning media	**Criteria:** Able to design ICT-based learning media	1. Basic questions 2. Design a product plan 3. Develop a manufacturing schedule 4. Monitor project activity and progress 2 x 50	1. Basic questions 2. Design a product plan 3. Develop a manufacturing schedule 4. Monitor project activity and progress 2 x 50	**Material:** Interactive multi-media learning media **References:** *Fenrich, P. 1997. Practical Guidelines for Developing Instructional Multimedia Applications. USA:Harcourt Brace College Publishers*	4%
15	Designing ICT-based learning media	Designing ICT-based learning media	**Criteria:** Able to design ICT-based learning media	1. Basic questions 2. Design a product plan 3. Develop a manufacturing schedule 4. Monitor project activity and progress 2 x 50	1. Basic questions 2. Design a product plan 3. Develop a manufacturing schedule 4. Monitor project activity and progress 2 x 50	**Material:** Interactive Learning Media **References:** *Heinich, R., Molenda. 1999. Instructional Media and Technologies for Learning. USA: Prentice Hall*	5%
16	1.Presenting produced contextual learning media 2.Presenting produced ICT-based learning media	1.Exhibiting the learning media produced 2.Processing the results of the assessment of the learning media produced	**Criteria:** 1.Able to present the learning media produced 2.Able to process assessment results on the learning media produced **Form of Assessment** : Project Results Assessment / Product Assessment	1. Test the results 2. Evaluate the learning experience 2 x 50	1. Test the results 2. Evaluate the learning experience 2 x 50	**Material:** ICT-based learning media **References:** *Smaldino, SE, Deborah LL, and James DR, 2011. Instructional Technology and Media for Learning: Learning Technology and Media for Learning. Jakarta: Kencana*	30%

Evaluation Percentage Recap: Project Based Learning

No	Evaluation	Percentage
1.	Participatory Activities	5%
2.	Project Results Assessment / Product Assessment	60%
3.	Portfolio Assessment	2%
		67%

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.