

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

Document Code

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Chemist	ry Ga	me Media		8420	4021	88								T=2	P=0	ECTS	=3.18		5	Jul	y 18, 2024
AUTHOR	RIZAT	ION		SP D	SP Developer				Course Cluster Coordinator				Stud Coo	ly Progr rdinator	ram						
																		Pi	rof. Dr. L M	Jtiya I.Pd.	Azizah,
Learning model	J	Project Based L	.ear	rning																	
Program Learning Outcomes	n	PLO study program which is charged to the course																			
	y ies	Program Objectives (PO)																			
(PLO)		PLO-PO Matrix																			
			P.O																		
		PO Matrix at th	ne e	end of e	each	learni	ng st	age (S	Sub-P	0)											
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Short Course Descript	tion	Study of the mea learning media b	anin y ut	ng, types ilizing th	s/clas ne sur	sificatio roundi	on, fur ng env	nctions /ironm	s, basi ent (co	cs of r ontextu	nedia Jal) ar	develo Id ICT	opment	t, as v	vell a	s being a	able to	o sele	ct, desig	jn an	d produce
Referen	ces	Main :																			
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	-	Supporters:																			
Support	ting	Prof Dr Achmor	41.0	utfi M De	4																
lecturer	ung	Rusly Hidayah, S	S.Si.	., M.Pd.	J.																
Week-	Fina eacl stag (Sul	nal abilities of ch learning age ub-PO)		valuat	ion	۶. Eor		0	Help Learning, Learning methods, Student Assignments, [Estimated time]				Learning materials [ References		As W	sessment 'eight (%)					
(1)		(2)		(2)			1011d	a ron		0	e (	5)	~)	0		(6)	• )		(7)		(8)
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1	Have the ability to determine chemical materials that can be presented with the game.	Can carry out material analysis that is appropriate to the game media	<ul> <li>Criteria:</li> <li>1. The assessment is carried out on the following aspects:</li> <li>2.1. Participation during lectures (weight 2)</li> <li>3.2. Subsummative test, carried out through a written exam, given weight (2)</li> <li>4.3. Assessment of presentations and papers, considered as assignments, then given weight (3)</li> <li>5.4. End of semester test as UAS score, given weight (3)</li> <li>6.5. The final NA is (participation value x2) (assignment value x 3) (UTS value x 2) UAS value (3) divided by 10</li> </ul>	Presentation, discussion. 2 X 50		0%
2	Determine game characteristics and characteristics of chemistry learning media.	Can carry out material analysis that is appropriate to the game media	<ul> <li>Criteria:</li> <li>1. The assessment is carried out on the following aspects:</li> <li>2.1. Participation during lectures (weight 2)</li> <li>3.2. Subsummative test, carried out through a written exam, given weight (2)</li> <li>4.3. Assessment of presentations and papers, considered as assignments, then given weight (3)</li> <li>5.4. End of semester test as UAS score, given weight (3)</li> <li>6.5. The final NA is (participation value x2) (assignment value x 3) (UTS value x 3) divided by 10</li> </ul>	Presentation, discussion. 2 X 50		0%

3	Identifying student characteristics that are suitable for games as a chemistry learning medium	Can carry out student analysis in accordance with game media	<ul> <li>Criteria:</li> <li>1. The assessment is carried out on the following aspects:</li> <li>2.1. Participation during lectures (weight 2)</li> <li>3.2. Subsummative test, carried out through a written exam, given weight (2)</li> <li>4.3. Assessment of presentations and papers, considered as assignments, then given weight (3)</li> <li>5.4. End of semester test as UAS score, given weight (3)</li> <li>6.5. The final NA is (participation value x2) (assignment value x 3) (UTS value x 2) UAS value (3) divided by 10</li> </ul>	Assignments and presentations. 2 X 50		0%
4	chernurynrg student characteristics that are suitable for games as a chemistry learning medium	Can carry out student analysis in accordance with game media	<ul> <li>Criteria:</li> <li>1. The assessment is carried out on the following aspects:</li> <li>2.1. Participation during lectures (weight 2)</li> <li>3.2. Subsummative test, carried out through a written exam, given weight (2)</li> <li>4.3. Assessment of presentations and papers, considered as assignments, then given weight (3)</li> <li>5.4. End of semester test as UAS score, given weight (3)</li> <li>6.5. The final NA is (participation value x2) (assignment value x 3) (UTS value x 2) UAS value (3) divided by 10</li> </ul>	Assignments and presentations. 2 X 50		υ%

5	Have the ability to design traditional games as a chemistry learning medium	Can carry out non-ICT game media development plans	<ul> <li>Criteria:</li> <li>1. The assessment is carried out on the following aspects:</li> <li>2.1. Participation during lectures (weight 2)</li> <li>3.2. Subsummative test, carried out through a written exam, given weight (2)</li> <li>4.3. Assessment of presentations and papers, considered as assignments, then given weight (3)</li> <li>5.4. End of semester test as UAS score, given weight (3)</li> <li>6.5. The final NA is (participation value x2) (assignment value x3) (UTS value x 2) UAS value (3) divided by 10</li> </ul>	Assignments, presentations and conducting experiments. 2 X 50		0%
6	Have the ability to design traditional games as a chemistry learning medium	Can carry out non-ICT game media development plans	<ul> <li>Criteria:</li> <li>1. The assessment is carried out on the following aspects:</li> <li>2.1. Participation during lectures (weight 2)</li> <li>3.2. Subsummative test, carried out through a written exam, given weight (2)</li> <li>4.3. Assessment of presentations and papers, considered as assignments, then given weight (3)</li> <li>5.4. End of semester test as UAS score, given weight (3)</li> <li>6.5. The final NA is (participation value x2) (assignment value x 3) (UTS value x 2) UAS value (3) divided by 10</li> </ul>	Assignments, presentations and conducting experiments. 2 X 50		0%

	design traditional games as a chemistry learning medium	out non-ICT game media development plans	<ol> <li>The assessment is carried out on the following aspects:</li> <li>Participation during lectures (weight 2)</li> <li>Subsummative test, carried out through a written exam, given weight (2)</li> <li>A.3. Assessment of presentations and papers, considered as assignments, then given weight (3)</li> <li>A. End of semester test as UAS score, given weight (3)</li> <li>The final NA is (participation value x2) (assignment value x 3) (UTS value x 2) UAS value (3) divided by 10</li> </ol>	experiments, experiments and presentations. 2 X 50		U-%0
8	Corresponds to the final ability at meetings 1-7	In accordance with the indicators at meetings 1- 7	<ul> <li>Criteria:</li> <li>1. The assessment is carried out on the following aspects:</li> <li>2.1. Participation during lectures (weight 2)</li> <li>3.2. Subsummative test, carried out through a written exam, given weight (2)</li> <li>4.3. Assessment of presentations and papers, considered as assignments, then given weight (3)</li> <li>5.4. End of semester test as UAS score, given weight (3)</li> <li>6.5. The final NA is (participation value x2) (assignment value x3) (UTS value x 2) UAS value (3) divided by 10</li> </ul>	Midterm Exam 2 X 50		0%

9	Have the ability to design games using ICT as a chemistry learning medium	Can carry out ICT game media development plans	Criteria: 1. The assessment is carried out on the following aspects: 2.1. Participation during lectures (weight 2) 3.2. Subsummative test, carried out through a written exam, given weight (2) 4.3. Assessment of presentations and papers, considered as assignments, then given weight (3) 5.4. End of semester test as UAS score, given weight (3) 6.5. The final NA is (participation value x2) (assignment value x 3) (UTS value x 2) UAS value (3) divided by 10	Assignments, experiments and presentations. 2 X 50		0%
10	Have the ability to design games using ICT as a chemistry learning medium	Can carry out ICT game media development plans	<ul> <li>Criteria:</li> <li>1. The assessment is carried out on the following aspects:</li> <li>2.1. Participation during lectures (weight 2)</li> <li>3.2. Subsummative test, carried out through a written exam, given weight (2)</li> <li>4.3. Assessment of presentations and papers, considered as assignments, then given weight (3)</li> <li>5.4. End of semester test as UAS score, given weight (3)</li> <li>6.5. The final NA is (participation value x2) (assignment value x 3) (UTS value x 2) UAS value (3) divided by 10</li> </ul>	Assignments, experiments and presentations. 2 X 50		0%

11	Have the ability to determine the criteria for a good game as a chemistry learning medium.	Can develop game media assessment instruments	<ul> <li>Criteria:</li> <li>1. The assessment is carried out on the following aspects:</li> <li>2.1. Participation during lectures (weight 2)</li> <li>3.2. Subsummative test, carried out through a written exam, given weight (2)</li> <li>4.3. Assessment of presentations and papers, considered as assignments, then given weight (3)</li> <li>5.4. End of semester test as UAS score, given weight (3)</li> <li>6.5. The final NA is (participation value x2) (assignment value x 3) (UTS value x 2) UAS value (3) divided by 10</li> </ul>	Presentations and experiments/exercises. 2 X 50		0%
12	Have the ability to determine the criteria for a good game as a chemistry learning medium.	Can develop game media assessment instruments	<ul> <li>Criteria:</li> <li>1. The assessment is carried out on the following aspects:</li> <li>2.1. Participation during lectures (weight 2)</li> <li>3.2. Subsummative test, carried out through a written exam, given weight (2)</li> <li>4.3. Assessment of presentations and papers, considered as assignments, then given weight (3)</li> <li>5.4. End of semester test as UAS score, given weight (3)</li> <li>6.5. The final NA is (participation value x2) (assignment value x 3) (UTS value x 2) UAS value (3) divided by 10</li> </ul>	Presentations and experiments/exercises. 2 X 50		0%

13	Have the ability to determine the criteria for a good game as a chemistry learning medium.	Can develop game media assessment instruments	<ul> <li>Criteria:</li> <li>1. The assessment is carried out on the following aspects:</li> <li>2.1. Participation during lectures (weight 2)</li> <li>3.2. Subsummative test, carried out through a written exam, given weight (2)</li> <li>4.3. Assessment of presentations and papers, considered as assignments, then given weight (3)</li> <li>5.4. End of semester test as UAS score, given weight (3)</li> <li>6.5. The final NA is (participation value x2) (assignment value x 3) (UTS value x 2) UAS value (3) divided by 10</li> </ul>	Presentations and experiments/exercises. 2 X 50		0%
14	Have the ability to create game prototypes as a chemistry learning medium	Can develop game media prototypes	<ul> <li>Criteria:</li> <li>1. The assessment is carried out on the following aspects:</li> <li>2.1. Participation during lectures (weight 2)</li> <li>3.2. Subsummative test, carried out through a written exam, given weight (2)</li> <li>4.3. Assessment of presentations and papers, considered as assignments, then given weight (3)</li> <li>5.4. End of semester test as UAS score, given weight (3)</li> <li>6.5. The final NA is (participation value x2) (assignment value x 3) (UTS value (3) divided by 10</li> </ul>	Experiment and present 2 X 50		0%

15	Have the ability to create game prototypes as a chemistry learning medium	Can develop game media prototypes	<ul> <li>Criteria: <ol> <li>The assessment is carried out on the following aspects:</li> <li>Participation during lectures (weight 2)</li> <li>Subsummative test, carried out through a written exam, given weight (2)</li> <li>Assessment of presentations and papers, considered as assignments, then given weight (3)</li> <li>S.4. End of semester test as UAS score, given weight (3)</li> <li>S.5. The final NA is (participation value x2) (assignment value x3) (UTS value x 2) UAS value (3) divided by 10</li> </ol></li></ul>	Experiment and present 2 X 50		0%
16	According to final abilities at meetings 9-15	According to indicators at meeting 9- 15	<ul> <li>Criteria:</li> <li>1. The assessment is carried out on the following aspects:</li> <li>2.1. Participation during lectures (weight 2)</li> <li>3.2. Subsummative test, carried out through a written exam, given weight (2)</li> <li>4.3. Assessment of presentations and papers, considered as assignments, then given weight (3)</li> <li>5.4. End of semester test as UAS score, given weight (3)</li> <li>6.5. The final NA is (participation value x2) (assignment value x 3) (UTS value x 2) UAS value (3) divided by 10</li> </ul>	Final Exam Semester 2 X 50		0%

 Evaluation Percentage Recap: Project Based Learning

 No
 Evaluation

 Percentage

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.
- 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.
- Forms of learning: Lecture, Response, Tutorial, Seminar or equivalent, Practicum, Studio Practice, Workshop Practice, Field 8. 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.