	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
Evaluation of Learning and Learning	8420402293	Compulsory Study Program Subjects	T=2	P=0	ECTS=3.18	3	May 7, 2023

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-10	Able to design, implement, evaluate, learn and develop chemistry learning media by utilizing Information and Communication Technology (CPL 4)
	PLO-12	Able to demonstrate chemical pedagogical knowledge about designing, implementing and evaluating chemistry learning (CPL 2)
	Program Objectives (PO)	
	PO - 1	Utilize several learning resources and ICT to develop assessments.
	PO - 2	Demonstrate critical thinking skills in selecting assessments that are appropriate to the learning indicators to be achieved.
	PO - 3	Skilled in managing various forms of assessment that are relevant to the knowledge, skills and attitudes of students, including students with special needs.
	PO - 4	Demonstrate the ability to use time in designing assessments.
	PO - 5	Master the concepts and principles of evaluation, measurement, assessment and be able to apply them in assessing learning processes and outcomes.
	PO - 6	Create instruments to assess learning processes and outcomes in the affective, cognitive and psychomotor domains that are adequate to learning indicators and are able to develop assessment guidelines.
	PO - 7	Have a responsible attitude by developing tests according to the aspects being measured.
	PLO-PO Matrix	

P.O	PLO-10	PLO-12
PO-1		
PO-2		
PO-3		
PO-4		
PO-5		
PO-6		
PO-7		

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																
PO-5																
PO-6																
PO-7																

Short Course Description	Study of the meaning, objectives, functions and principles of evaluation, taxonomy of cognitive, affective, psychomotor learning outcomes, evaluation strategies (paper & pencil and alternative evaluation), forms of evaluation instruments, rubrics, analysis and interpretation of evaluation results, class-based evaluation , evaluation for science process skills and scientific attitudes (including character).
References	**Main :**

1. 1 Tim. 2015. Buku Pegangan Mahasiswa: Evaluasi. Yogyakarta: Absolute Media.
2. 2. Arends, Richard I. (2004). Guide to Field Experiences ad Portofolio Development: to accompany ;learning to teach. New York: McGraw-Hill Book Company.
3. 3. Arikunto, Suharsimi / I. Jabar, Cepi Safruddin Abdul. 2008. Evaluasi program pendidikan: pedoman teoritis bagi mahasiswa dan praktisi pendidikan . Jakarta: BumiAksara.
4. 4. Brookhart, Susan M. 2010. How to assess higher-order thinking skills in your classroom. Alexandria: ASCD.
5. 5. George, David. 2005. Examination and evaluation in education . New Delhi: Commonwealth.
6. 6. Glencoe Series. Tanpa Tahun. Performance Assessment in The Science Classroom. New York: McGraw- Hill Company.
7. 7. I. Naik, S.P. 2004. Role of evaluation in education . New Delhi: Anmol Publications PVT.
8. 8. Johnson, David W. and Johnson, Robert T. 2002. Meaningful Assessment Manageable and Cooperative process. Boston: Allyn and Bacon.

Supporters:

Supporting lecturer	Prof. Dr. Harun Nasrudin, M.S. Prof. Dr. Hj. Rudiana Agustini, M.Pd. Prof. Dr. Utiya Azizah, M.Pd. Dr. Muchlis, 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	Describe the role of assessment in education and learning.	1. Analyze assessment principles that are not applied in the National Examination. 2. Provide an opinion if the National Examination/UN is the sole determinant of student graduation. 3. Analyze the incompatibility of assessment principles applied to a case example	**Criteria:** Participation with a weight of 20%, Assignments with a weight of 30%, UTS with a weight of 20% and UAS with a weight of 30% **Form of Assessment** : Test	Case Study, Lectures, informational discussions, assignments. 2x50		**Material:** Assessment principles **Literature:** *1 Team. 2015. Student Handbook: Evaluation. Yogyakarta: Absolute Media.* **Material:** Objectives, types and functions of assessment **References:** *3. Arikunto, Suharsimi / I. Jabar, Cepi Safruddin Abdul. 2008. Evaluation of educational programs: theoretical guidance for students and educational practitioners. Jakarta: BumiAksara.*	10%

2	Analyze the suitability of assessments with competencies	1. Analyzing the suitability of KD and examples of assessments in the syllabus 2. Provide suggestions to improve assessments in accordance with KD	**Criteria:** Participation with a weight of 20%, Assignments with a weight of 30%, UTS with a weight of 20% and UAS with a weight of 30% **Form of Assessment** : Participatory Activities, Tests	Lectures, information discussions, assignments, presentations 2x50"		**Material:** The meaning of assessment in education and learning, **References:** *1 Team. 2015. Student Handbook: Evaluation. Yogyakarta: Absolute Media.* **Material:** 2. Assessment at various levels of education **References:** *5. George, David. 2005. Examination and evaluation in education. New Delhi: Commonwealth.*	5%
3	Explain the differences between the old and revised Bloom's taxonomy.	Students can explain the Taxonomy of the attitude domain.	**Criteria:** Participation with a weight of 20%, Assignments with a weight of 30%, UTS with a weight of 20% and UAS with a weight of 30% **Form of Assessment** : Participatory Activities	Lectures, information discussions, assignments, presentations. 2x50		**Material:** Understanding measurement, assessment and evaluation. **Library:** *1 Team. 2015. Student Handbook: Evaluation. Yogyakarta: Absolute Media.* **Material:** Test status, measurement, assessment and evaluation. **References:** *7. I. Naik, SP 2004. Role of evaluation in education. New Delhi: Anmol Publications PVT.*	10%

4	Develop assessment indicators for the domains of attitudes, knowledge and skills (cognitive, affective and psychomotor).	Students can develop assessment indicators for the domains of attitudes, knowledge and skills (cognitive, affective and psychomotor).	**Criteria:** Participation with a weight of 20%, Assignments with a weight of 30%, UTS with a weight of 20% and UAS with a weight of 30% **Form of Assessment** : Project Results Assessment / Product Assessment, Test	Lectures, information discussions, assignments. 2x50"		**Material:** Taxonomy of attitude domains **References:** *1 Team. 2015. Student Handbook: Evaluation. Yogyakarta: Absolute Media.* **Material:** Taxonomy of attitude domains **References:** *3. Arikunto, Suharsimi / I. Jabar, Cepi Safruddin Abdul. 2008. Evaluation of educational programs: theoretical guidance for students and educational practitioners. Jakarta: BumiAksara.* **Material:** Taxonomy of knowledge domains **References:** *4. Brookhart, Susan M. 2010. How to assess higher-order thinking skills in your classroom. Alexandria: ASCD.* **Material:** Taxonomy of skills domains **References:** *4. Brookhart, Susan M. 2010. How to assess higher-order thinking skills in your classroom. Alexandria: ASCD.*	10%
5	Develop learning outcomes tests and rubrics.	1. Students can explain the meaning, advantages and disadvantages of the test. 2. Students can explain the techniques, types and forms of tests.	**Criteria:** Participation with a weight of 20%, Assignments with a weight of 30%, UTS with a weight of 20% and UAS with a weight of 30% **Form of Assessment** : Participatory Activities, Tests	Lectures, information discussions, assignments. 2x50"		**Material:** Taxonomy of the psychomotor domain **Reference:** *6. Glencoe Series. No Year. Performance Assessment in The Science Classroom. New York: McGraw-Hill Company.*	10%

6	Explain the definition, advantages and disadvantages of authentic assessment	Students can explain the meaning of authentic assessment, the advantages and disadvantages of authentic assessment	**Criteria:** Participation with a weight of 20%, Assignments with a weight of 30%, UTS with a weight of 20% and UAS with a weight of 30% **Form of Assessment** : Participatory Activities	Lectures, information discussions, assignments. 2x50		**Material:** Understanding the advantages and disadvantages of tests **Literature:** *1 Team. 2015. Student Handbook: Evaluation. Yogyakarta: Absolute Media.* **Material:** Understanding the advantages and disadvantages of tests. **References:** *3. Arikunto, Suharsimi / I. Jabar, Cepi Safruddin Abdul. 2008. Evaluation of educational programs: theoretical guidance for students and educational practitioners. Jakarta: BumiAksara.* **Material:** Techniques, types and forms of tests **References:** *5. George, David. 2005. Examination and evaluation in education. New Delhi: Commonwealth.*	5%
7	Explain the types of authentic assessments and their assessment rubrics.	Students can explain various types of authentic assessments, for example: performance assessments, journals, project assignments, portfolios, affective domain assessments (character behavior and social skills), etc.	**Criteria:** Participation with a weight of 20%, Assignments with a weight of 30%, UTS with a weight of 20% and UAS with a weight of 30% **Form of Assessment** : Project Results Assessment / Product Assessment, Test	Lectures, information discussions, assignments. 2x50		**Material:** Test assessment rubric, scoring, converting scores into grades. **Library:** *1 Team. 2015. Student Handbook: Evaluation. Yogyakarta: Absolute Media.* **Material:** Interpretation of learning results. **Library:** *1 Team. 2015. Student Handbook: Evaluation. Yogyakarta: Absolute Media.* **Material:** Test review. **References:** *7. I. Naik, SP 2004. Role of evaluation in education. New Delhi: Anmol Publications PVT.*	5%

8	UTS	UTS	**Criteria:** Participation with a weight of 20%, Assignments with a weight of 30%, UTS with a weight of 20% and UAS with a weight of 30% **Form of Assessment** : Test	2x50"		**Material:** Understanding Learning Evaluation and types of assessment instruments **Literature:** *1 Team. 2015. Student Handbook: Evaluation. Yogyakarta: Absolute Media.*	0%
9	Analyze learning outcomes tests and rubrics	Students can explain the meaning of authentic assessment.	**Criteria:** Participation with a weight of 20%, Assignments with a weight of 30%, UTS with a weight of 20% and UAS with a weight of 30% **Form of Assessment** : Test	Case study, Lecture, discussion-information, assignment 2x50		**Material:** Understanding authentic assessment **References:** *8. Johnson, David W. and Johnson, Robert T. 2002. Meaningful Assessment Manageable and Cooperative process. Boston: Allyn and Bacon.* **Material:** Advantages and disadvantages of authentic assessment. **References:** *8. Johnson, David W. and Johnson, Robert T. 2002. Meaningful Assessment Manageable and Cooperative process. Boston: Allyn and Bacon.*	5%

10	Analyze learning outcomes tests and rubrics.	Students can explain scoring, grading and converting scores into grades.	**Criteria:** Participation with a weight of 20%, Assignments with a weight of 30%, UTS with a weight of 20% and UAS with a weight of 30% **Form of Assessment** : Test	Case study, Lecture, discussion-information, assignment 2x50		**Material:** Types of authentic assessments, for example: performance assessments, journals, project assignments, portfolios, affective domain assessments (characteristic behavior and social skills), etc. **Bibliography:** *2. Arends, Richard I. (2004). Guide to Field Experiences ad Portfolio Development: to accompany ;learning to teach. New York: McGraw-Hill Book Company.* **Material:** Types of authentic assessments, for example: performance assessments, journals, project assignments, portfolios, affective domain assessments (character behavior and social skills), etc. **Library:** *6. Glencoe Series. No Year. Performance Assessment in The Science Classroom. New York: McGraw-Hill Company.*	5%
11	1.Explain the types of validity. 2.Describe the validity of assessment instruments.	1.Students can explain the types of validity. 2.Students can describe the validity of the test instrument.	**Criteria:** Participation with a weight of 20%, Assignments with a weight of 30%, UTS with a weight of 20% and UAS with a weight of 30%. **Form of Assessment** : Test	Lectures, discussion-information, assignments 2x50		**Material:** Authentic assessment rubric, scoring, converting scores into grades. **References:** *8. Johnson, David W. and Johnson, Robert T. 2002. Meaningful Assessment Manageable and Cooperative process. Boston: Allyn and Bacon.* **Material:** Authentic assessment rubric, scoring, converting scores into grades. **Bibliography:** *5. George, David. 2005. Examination and evaluation in education. New Delhi: Commonwealth.*	5%

12	Explain the various methods of finding reliability coefficients.	Students can explain various methods for finding reliability coefficients.	**Criteria:** Participation with a weight of 20%, Assignments with a weight of 30%, UTS with a weight of 20% and UAS with a weight of 30% **Form of Assessment** : Test	Lectures, discussion-information, assignments 2x50		**Material:** validity and reliability. **Library:** *1 Team. 2015. Student Handbook: Evaluation. Yogyakarta: Absolute Media.* **Material:** factors that influence validity. **Bibliography:** *5. George, David. 2005. Examination and evaluation in education. New Delhi: Commonwealth.* **Material:** factors that influence reliability. **References:** *3. Arikunto, Suharsimi / I. Jabar, Cepi Safruddin Abdul. 2008. Evaluation of educational programs: theoretical guidance for students and educational practitioners. Jakarta: BumiAksara.*	5%
13	Calculating test reliability.	Students can calculate test reliability.	**Criteria:** Participation with a weight of 20%, Assignments with a weight of 30%, UTS with a weight of 20% and UAS with a weight of 30%. **Form of Assessment** : Test	Case Study, Lectures, informational discussions, assignments. 2x50		**Material:** various methods for finding reliability coefficients. **References:** *7. I. Naik, SP 2004. Role of evaluation in education. New Delhi: Anmol Publications PVT.* **Material:** various methods for finding reliability coefficients. **Library:** *1 Team. 2015. Student Handbook: Evaluation. Yogyakarta: Absolute Media.*	5%

14	Analyze the question items.	Students can analyze test items, including: level of achievement of indicators for criteria-referenced items, sensitivity index for criteria-referenced items, level of difficulty of test items, discriminating power, effectiveness of options, validity of norm-referenced items.	**Criteria:** Participation with a weight of 20%, Assignments with a weight of 30%, UTS with a weight of 20% and UAS with a weight of 30%. **Form of Assessment** : Test	Case Study, Lecture, information-discussion, 2x50 assignments		**Material:** Calculating the reliability of tests based on norms and benchmarks. **Library:** *1 Team. 2015. Student Handbook: Evaluation. Yogyakarta: Absolute Media.* **Material:** Calculating the reliability of tests based on norms and benchmarks. **References:** *7. I. Naik, SP 2004. Role of evaluation in education. New Delhi: Anmol Publications PVT.*	15%
15	Interpret test results.	Students can interpret test results.	**Criteria:** Participation with a weight of 20%, Assignments with a weight of 30%, UTS with a weight of 20% and UAS with a weight of 30%. **Form of Assessment** : Test	Case Study, Lectures, informational discussions, assignments.		**Material:** questions, including: level of achievement of criteria-referenced item indicators, sensitivity index of criterion-referenced items, level of difficulty of test items, discriminating power, effectiveness of options, validity of norm-referenced items. **Reference:** *1 Team. 2015. Student Handbook: Evaluation. Yogyakarta: Absolute Media.* **Material:** questions, including: level of achievement of criteria-referenced item indicators, sensitivity index of criterion-referenced items, level of difficulty of test items, discriminating power, effectiveness of options, validity of norm-referenced items. **Reference:** *3. Arikunto, Suharsimi / I. Jabar, Cepi Safruddin Abdul. 2008. Evaluation of educational programs: theoretical guidance for students and educational practitioners. Jakarta: BumiAksara.*	5%

						Material: questions, including: level of achievement of criteria-referenced item indicators, sensitivity index of criterion-referenced items, level of difficulty of test items, discriminating power, effectiveness of options, validity of norm-referenced items. **Reference:** *3. Arikunto, Suharsimi / I. Jabar, Cepi Safruddin Abdul. 2008. Evaluation of educational programs: theoretical guidance for students and educational practitioners. Jakarta: BumiAksara.*	
16	UTS	UTS	**Criteria:** Participation with a weight of 20%, Assignments with a weight of 30%, UTS with a weight of 20% and UAS with a weight of 30% **Form of Assessment** : Test	2x50"		**Material:** Qualitative study of questions to quantitative study of questions **References:** *1 Team. 2015. Student Handbook: Evaluation. Yogyakarta: Absolute Media.*	0%

Evaluation Percentage Recap: Project Based Learning

No	Evaluation	Percentage
1.	Participatory Activities	22.5%
2.	Project Results Assessment / Product Assessment	7.5%
3.	Test	70%
		100%

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.