



**Universitas Negeri Surabaya  
Faculty of Engineering,  
Cosmetology Education Undergraduate Study Program**

Document Code

**SEMESTER LEARNING PLAN**

<b>Courses</b>	<b>CODE</b>	<b>Course Family</b>	<b>Credit Weight</b>			<b>SEMESTER</b>	<b>Compilation Date</b>																																										
Applied Chemistry	8321302050		T=2	P=0	ECTS=3.18	1	July 18, 2024																																										
<b>AUTHORIZATION</b>	<b>SP Developer</b>		<b>Course Cluster Coordinator</b>			<b>Study Program Coordinator</b>																																											
	.....		.....			Nia Kusstianti, S.Pd., M.Pd.																																											
<b>Learning model</b>	Case Studies																																																
<b>Program Learning Outcomes (PLO)</b>	PLO study program that is charged to the course																																																
	Program Objectives (PO)																																																
	PLO-PO Matrix																																																
		P.O																																															
<b>Short Course Description</b>	PO Matrix at the end of each learning stage (Sub-PO)																																																
		<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tr> <td rowspan="2" style="width: 5%;">P.O</td> <td colspan="16">Week</td> </tr> <tr> <td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>10</td><td>11</td><td>12</td><td>13</td><td>14</td><td>15</td><td>16</td> </tr> </table>																P.O	Week																1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
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	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16																																	
<b>References</b>	<p><b>Main :</b></p> <ol style="list-style-type: none"> <li>1. Hariyadi W. 1993. Stoikhiometri. Jakarta : Gramedia.</li> <li>2. HadyanaPudjaatmaka, A. 1999. Ilmu Kimia Untuk Universitas Jilid</li> <li>3. Jakarta : Erlangga. 3. Syukri, S. 1999. Kimia Dasar</li> <li>4. Bandung: Penerbit ITB</li> <li>5. PonisTarigan. . Kimia Organik Bahan Makanan. Bandung: Alumn</li> </ol> <p><b>Supporters:</b></p>																																																
<b>Supporting lecturer</b>	Dra. Hj. Siti Sulandjari, M.Si.																																																
<b>Week-</b>	<b>Final abilities of each learning stage (Sub-PO)</b>	<b>Evaluation</b>		<b>Help Learning, Learning methods, Student Assignments, [ Estimated time]</b>		<b>Learning materials [ References ]</b>	<b>Assessment Weight (%)</b>																																										
		<b>Indicator</b>	<b>Criteria &amp; Form</b>	<b>Offline ( offline )</b>	<b>Online ( online )</b>																																												
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)																																										

1	Mastering the RPS components of Applied Chemistry and the importance of Chemistry	<ol style="list-style-type: none"> <li>1.Explains the description of the Applied Chemistry course</li> <li>2.Explain the rules and assignments of the Applied Chemistry course</li> <li>3.Explain the importance of Chemistry</li> </ol>	<b>Criteria:</b> Students have been able to answer all the questions on the assessment instrument.	Learning Model: Cooperative Learning Method: Discussion and question and answer 2 X 50		0%
2	Mastering the concepts of matter and energy	<ol style="list-style-type: none"> <li>1.Explain the concept of matter</li> <li>2.Explain the concept of energy</li> <li>3.Classifying materials</li> <li>4.Classifying energy</li> <li>5.Describe the mixture</li> <li>6.Give examples of compound and mixture elements in the field of Cosmetology</li> </ol>	<b>Criteria:</b> Answer according to the answer key (attached)	Learning Model: Cooperative Learning Method: Discussion Questions and Answers Assignment 2 X 50		0%
3	Mastering the properties and changes of chemical materials	<ol style="list-style-type: none"> <li>1.Explain the nature of matter</li> <li>2..Explain the difference between chemical changes and physical changes</li> <li>3.Give examples of physical and chemical changes in the field of Cosmetology</li> </ol>	<b>Criteria:</b> Full score is given if you answer all questions correctly according to the answer key	Learning model: Cooperative Learning method: Question and answer discussion on assignment 2 X 50		0%
4	Understand the concept of chemical bonds and their types	<ol style="list-style-type: none"> <li>1.Explain the meaning of chemical bonding</li> <li>2.Explain the meaning of ionic bonds</li> <li>3.Explain covalent bonds</li> <li>4.Explain hydrogen bonds</li> <li>5.Identifying Relative Atomic Mass and Molecular Relative Mass</li> </ol>	<b>Criteria:</b> Full score is given if you answer all questions correctly	Learning Model: Cooperative Learning method: 2 X 50 Question and Answer Discussion		0%

5	Understand basic calculations in Chemistry	<ol style="list-style-type: none"> <li>1.Explaining Avogadro's Law</li> <li>2.Apply the mole concept to a reaction</li> <li>3.Counting the number of particles in a known unit weight of matter</li> <li>4.Determine the molar mass</li> </ol>	<b>Criteria:</b> Full score is given if you answer all questions correctly according to the answer key (attached)	Learning model: Cooperative Learning method: Discussion Question and answer Assignment 2 X 50			0%
6	Understand the concept of chemical solutions and solution concentrations	<ol style="list-style-type: none"> <li>1.Explain the meaning of solution</li> <li>2.Explain the properties of solutions</li> <li>3.Explain the types of solutions</li> <li>4.Explain the meaning of solution concentration</li> <li>5.Explain the expression of concentration in percent</li> <li>6.Determine the percent solution for examples in the field of Cosmetology</li> <li>7.Explain the statement of molarity of a solution</li> <li>8.Determine the molarity of the Rias field sample solution</li> <li>9.Explains concentration in ppm</li> <li>10.Determine the concentration in ppm</li> </ol>	<b>Criteria:</b> Full score is given if you do all the questions correctly as in the answer key (attached)	Learning model: Cooperative Learning method: Question and answer discussion Assignment 4 X 50			0%
7							0%
8				2 X 50			0%
9	Understand calculations in chemical reactions	<ol style="list-style-type: none"> <li>1.Explain the meaning of chemical reactions</li> <li>2.Explain the reaction equation</li> <li>3.Perform chemical reaction balancing procedures</li> </ol>	<b>Criteria:</b> Full score is given if you do all the questions correctly according to the answer key (attached)	Learning model: cooperative Learning method: Question-answer discussion on 2 X 50 assignments			0%

10	Understand limiting reagents	<ol style="list-style-type: none"> <li>1.Explain the concept of limiting reagent</li> <li>2.Explain the steps to determine the limiting reagent</li> <li>3.Determine the limiting reagent from at least 3 chemical reactions</li> <li>4.Calculate the reagents and reaction products of at least 2 chemical reactions</li> </ol>	<b>Criteria:</b> Full score is given if you do all the questions correctly according to the answer key (attached)	Learning model: Cooperative Learning method: Discussion Question and answer Assignment 4 X 50			0%
11							0%
12	Understand colloids and emulsions	<ol style="list-style-type: none"> <li>1.Explain the meaning of colloids</li> <li>2.Explain the properties of colloids</li> <li>3.Identify the types of colloids</li> <li>4.Explain the meaning of emulsion</li> <li>5.Identify examples of emulsions</li> </ol>	<b>Criteria:</b> Full score is given if all questions are answered correctly according to the answer key (attached)	Learning model: Cooperative Learning Method: Discussion Questions and answers Assignment 1 X 50			0%
13	Understand acid base salt compounds and PH	<ol style="list-style-type: none"> <li>1.Explain the meaning of acid</li> <li>2.Explain the properties of acids</li> <li>3.Identify acids</li> <li>4.Explain the meaning of language</li> <li>5.Explain the properties of bases</li> <li>6.Identify alkaline substances</li> <li>7.Explain how to identify acids and bases</li> <li>8.Identify the function of acids and bases in the field</li> <li>9.Explain the meaning of salt</li> <li>10.Explain the properties of salt</li> <li>11.Identify salt</li> </ol>	<b>Criteria:</b> Full score is given if all questions are done correctly as per the answer key (attached)	Learning model: Cooperative Learning method: Discussion Question and answer Assignment 4 X 50			0%
14							0%

15	Understand about carbohydrates and protein	1.Describe carbohydrates 2.Explain the properties of carbohydrates 3.Explain changes in carbohydrates 4.Describe proteins 5.Explain the properties of proteins 6.Explain protein changes.	<b>Criteria:</b> Full score is given if all questions are answered correctly according to the answer key (attached)	Learning model: Cooperative Learning method: Question and answer discussion 2 X 50			0%
16							0%

#### Evaluation Percentage Recap: Case Study

No	Evaluation	Percentage
		0%

#### 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.**