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

SEMESTER LEARNING PLAN

Courses	CODE	Course Family	Credit Weight			SEMESTER	Compilation Date
Cosmetic Chemistry	4720102106	Study Program Elective Courses	T=2	P=0	ECTS=3.18	5	January 4, 2024

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 that is charged to the course

PLO-3	Develop logical, critical, systematic and creative thinking in carrying out specific work in their field of expertise and in accordance with work competency standards in the field concerned
PLO-5	Building teamwork and having an entrepreneurial spirit with an environmental perspective, as well as making correct, honest and responsible decisions in solving chemical problems
PLO-6	Able to adapt to various developments in chemical science, continue to develop and learn throughout life to continue education, both formal and non-formal

Program Objectives (PO)

PO - 1	Students have knowledge of the basic principles of chemical aspects in the field of cosmetics in terms of initial understanding of the definition of cosmetics, the main functions of cosmetics, classification of cosmetics from various reviews, cosmetic ingredients based on the characteristics of cosmetic ingredients (physical properties and chemical properties), the process of making cosmetics, development cosmetic research and preparation of cosmetic patents
PO - 2	Students are skilled at using tools in the process of making cosmetic preparations and analyzing cosmetic products in terms of the materials that make up cosmetics, the process of making cosmetics, essential ingredients in cosmetics, dangerous ingredients in cosmetics, making cosmetics that are safe for health, traditional cosmetics and cosmetic research development.
PO - 3	Students have the ability to collaborate in carrying out the process of making cosmetic preparations and analyzing cosmetic products in terms of the materials that make up cosmetics, the process of making cosmetics in terms of physical chemistry, essential ingredients in cosmetics, dangerous ingredients in cosmetics, making cosmetics that are safe for health, traditional cosmetics and cosmetic research development

PLO-PO Matrix

P.O	PLO-3	PLO-5	PLO-6
PO-1	✔		
PO-2			✔
PO-3		✔	

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												✔	✔			

Short Course Description	A study of the basic principles of chemical aspects in the field of cosmetics in terms of the initial understanding of the definition of cosmetics, the main function of cosmetics, the classification of cosmetics from various reviews, the materials that make up cosmetics, the process of making cosmetics in terms of physical chemistry, essential ingredients in cosmetics, ingredients - dangerous ingredients in cosmetics, making cosmetics that are safe for health, traditional cosmetics, developing cosmetic research and preparing cosmetic patents accompanied by supporting laboratory activities so that students are able to master related concepts, are skilled in using tools, are able to work together and be responsible and can communicate scientific knowledge and skills
References	**Main :**
	1. Retno I.S.Tranggono , 2006, 1CIlmu Pengetahuan Kosmetik, Penerbit Gramedia Jakarta Indonesia. 2. Shaath N.A., 1990, Sunscreens, Development, Evaluation, and RegulatoryAspects, Marcel Dekker, INC, New York. 3. Kreps, S.I., Goldenberg, 1972, Suntan Preparation in Balsam MSC, Cosmetic Sciense and Technology,2nd ed, John Wiley & Sons, Inc. 4. Harry R.G., 1982, Harry 19s Cosmeticology, 6th edition, The Principle and Practice OfModern Cosmetic, Leonard Hill Book, London 5. Taufikurohmah T, 2015, Kimia Kosmetik, edisi kedua.
	Supporters:
Supporting lecturer	Prof. Dr. Titik Taufikurohmah, S.Si., M.Si. Rusmini, S.Pd., M.Si.

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 Cosmetology and Cosmetic Chemistry	Able to explain the scope of the material and the limitations of both	**Criteria:** the description test weighs 25% while the product and performance assessment is 75% **Form of Assessment** : Participatory Activities, Tests	Using information and interactive discussion methods 2 X 50		**Material:** introduction to cosmetic chemistry **Reader:** *Retno ISTranggono, 2006, 1CIlmu Ilmu Cosmetik, Gramedia Publisher Jakarta Indonesia.*	2%
2	Get to know cosmetic ingredients from their physical properties and chemical structure	Able to recognize the properties of the ingredients that make up cosmetic formulas, their function and composition in cosmetic formulas	**Criteria:** Student answers are included in the participation value **Form of Assessment** : Participatory Activities	Lecture and demonstration on the introduction of materials in front of the 2 X 50 class		**Material:** sunscreen **Reference:** *Shaath NA, 1990, Sunscreens, Development, Evaluation, and Regulatory Aspects, Marcel Dekker, INC, New York.* **Material:** sunscreen **References:** *Kreps, SI, Goldenberg, 1972, Suntan Preparation in Balsam MSC, Cosmetic Science and Technology, 2nd ed, John Wiley & Sons, Inc.*	2%
3	Get to know cosmetic ingredients from their physical properties and chemical structure	Able to recognize the properties of the ingredients that make up cosmetic formulas, their function and composition in cosmetic formulas	**Criteria:** Student answers are included in the participation value **Form of Assessment** : Participatory Activities	Lecture and demonstration on the introduction of materials in front of the 2 X 50 class		**Material:** antiaging **Reference:** *Taufikurohmah T, 2015, Cosmetic Chemistry, second edition.*	0%

4	Get to know the active ingredients of cosmetics	Being able to recognize active cosmetic ingredients, their relationship to the type of formula and composition in cosmetics is also able to recognize dangerous ingredients in cosmetics	**Criteria:** Student answers are included in the participation value **Form of Assessment** : Participatory Activities	Using 2 X 50 interactive lecture and discussion methods		**Material:** cosmetic ingredients **Reference:** *Taufikurohmah T, 2015, Cosmetic Chemistry, second edition.*	2%
5	Get to know the active ingredients of cosmetics	Able to recognize dangerous ingredients in cosmetics	**Criteria:** Student answers are included in the participation value **Form of Assessment** : Participatory Activities	Lecture and demonstration on the introduction of materials in front of the 2 X 50 class		**Material:** dangerous cosmetic ingredients **Reference:** *Taufikurohmah T, 2015, Cosmetic Chemistry, second edition.*	2%
6	Understanding sunscreen compounds	Able to define sunscreen compounds and calculate the SPF value of sunscreen	**Criteria:** Student answers are included in the participation value **Form of Assessment** : Participatory Activities	Using lecture methods, interactive discussions and 2 X 50 practice questions			0%
7	Understanding antiaging compounds	Able to define antiaging compounds and calculate the antioxidant value of antiaging	**Criteria:** Student answers are included in the participation value	Using lecture methods, interactive discussions and 2 X 50 practice questions		**Material:** sunscreen **Reference:** *Shaath NA, 1990, Sunscreens, Development, Evaluation, and Regulatory Aspects, Marcel Dekker, INC, New York.*	2%
8	UTS	meeting indicators 1 to 7	**Criteria:** UTS component entry value **Form of Assessment** : Test	2 X 50 test		**Material:** all materials **Reference:** *Taufikurohmah T, 2015, Cosmetic Chemistry, second edition.*	10%
9	Understanding emulsion systems	Able to understand the emulsion system Able to understand the manufacture of emulsions for cosmetics	**Criteria:** Student answers are included in the participation value **Form of Assessment** : Participatory Activities	Using the lecture method, interactive discussion 2 X 50		**Material:** emulsion **Reference:** *Taufikurohmah T, 2015, Cosmetic Chemistry, second edition.*	0%
10	Practice of making cosmetic preparations; morning cream, night cream, moisturizing cream, whitening cream and facial soap	Able to make cosmetic preparation formulas and able to make 4 main types of creams in cosmetics and various facial soaps	**Criteria:** Pre-lab, post-lab, assignment score entry reports **Forms of Assessment** : Project Results Assessment / Product Assessment, Practical Assessment	Laboratory Practice 4 X 50		**Material:** cream making **Reference:** *Taufikurohmah T, 2015, Cosmetic Chemistry, second edition.*	15%

11	Practice of making cosmetic preparations; morning cream, night cream, moisturizing cream, whitening cream and facial soap	Able to make cosmetic preparation formulas and able to make 4 main types of creams in cosmetics and various facial soaps	**Criteria:** Pre-lab, post-lab, assignment score entry reports **Form of Assessment** : Project Results Assessment / Product Assessment	Laboratory Practice 4 X 50		**Material:** cream making **Reference:** *Taufikurohmah T, 2015, Cosmetic Chemistry, second edition.*	15%
12	Cosmetic research development	Able to explain research ideas, research design and analysis in the field of cosmetics	**Criteria:** Student answers are included in the participation value **Form of Assessment** : Participatory Activities, Project Results Assessment / Product Assessment	Interactive lectures 2 X 50		**Material:** cosmetic development **Reference:** *Taufikurohmah T, 2015, Cosmetic Chemistry, second edition.*	15%
13	Cosmetic research development	Able to explain research ideas, research design and analysis in the field of cosmetics	**Criteria:** Student answers are included in the participation value **Form of Assessment** : Project Results Assessment / Product Assessment	Presentation and discussion 2 X 50		**Material:** cosmetic development **Reference:** *Taufikurohmah T, 2015, Cosmetic Chemistry, second edition.*	15%
14	Preparation of cosmetic patents	Able to prepare detailed processes for making cosmetic formulas in patent format	**Criteria:** Student answers are included in the participation value **Form of Assessment** : Project Results Assessment / Product Assessment	Interactive lectures 2 X 50		**Material:** patents **Reference:** *Taufikurohmah T, 2015, Cosmetic Chemistry, second edition.*	12%
15	Preparation of cosmetic patents	Able to prepare detailed processes for making cosmetic formulas in patent format	**Criteria:** Student answers are included in the participation value	Presentation and discussion 2 X 50		**Material:** patents **Reference:** *Taufikurohmah T, 2015, Cosmetic Chemistry, second edition.*	15%
16	UAS	Meeting indicators 9-15	**Criteria:** entrance value of UAS components **Form of Assessment** : Test	2 X 50 test		**Material:** all materials **Reference:** *Taufikurohmah T, 2015, Cosmetic Chemistry, second edition.*	10%

Evaluation Percentage Recap: Project Based Learning

No	Evaluation	Percentage
1.	Participatory Activities	14.5%
2.	Project Results Assessment / Product Assessment	57%
3.	Practical Assessment	7.5%
4.	Test	21%
		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.