

COURSE OUTLINE

1. GENERAL

SCHOOL	SCHOOL OF HEALTH AND CARE SCIENCES		
ACADEMIC UNIT	DEPARTMENT OF BIOMEDICAL SCIENCES-AESTHETICS AND COSMETIC SCIENCE		
LEVEL OF STUDIES	UNDERGRADUATE		
COURSE CODE	8081	SEMESTER	7
COURSE TITLE	PACKAGING OF COSMETIC PRODUCTS		
INDEPENDENT TEACHING ACTIVITIES <i>if credits are awarded for separate components of the course, e.g. lectures, laboratory exercises, etc. If the credits are awarded for the whole of the course, give the weekly teaching hours and the total credits</i>		WEEKLY TEACHING HOURS	CREDITS
Lectures		3	
Laboratory exercises		-	
			5
<i>Add rows if necessary. The organisation of teaching and the teaching methods used are described in detail at (d).</i>			
COURSE TYPE <i>general background, special background, specialised general knowledge, skills development</i>	OCSBC		
PREREQUISITE COURSES:	NO		
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	Greek		
IS THE COURSE OFFERED TO ERASMUS STUDENTS	YES		
COURSE WEBSITE (URL)	https://bisc.uniwa.gr/course/syskeyasia-kallyntikon-proionton/ https://eclass.uniwa.gr/courses/AISTH164/		

The aim of the course is for students to understand the basic principles of development, design, compatibility and control study of packaging materials, which are necessary for the creation and production of safe and quality cosmetic products.

The goal of the course is to teach students the different types of materials (using polymer science), which proper cosmetic products will be packaged in them, and to be able to apply their stability and control methods to the final products.

Learning results:

After the end of the course the students will be able to know:

- How to choose (design) the appropriate packaging materials for the respective types of cosmetic products. E.g. baby, sunscreen cosmetics, products for the oral cavity, face, hair etc.
- How to perform the appropriate tests of the stability and compatibility with the product, applying appropriate protocols (methods).
- The methods of control of the packaging materials, upon delivery at the cosmetics factory, in accordance with the Good Manufacturing Practice (GMP) guidelines and the requirements of the National Organization for Medicines.

- The control and evaluation of the final formulations, over time, for the final evaluation of stability (lifetime) of the product.
- How to evaluate, through the appropriate tests (physicochemical, microbiological, testing of packaging materials), the Period After Opening (PAO), which is mandatory to be mentioned on the packaging.

General Competences

Taking into consideration the general competences that the degree-holder must acquire (as these appear in the Diploma Supplement and appear below), at which of the following does the course aim?

<i>Search for, analysis and synthesis of data and information, with the use of the necessary technology</i>	<i>Project planning and management</i>
<i>Adapting to new situations</i>	<i>Respect for difference and multiculturalism</i>
<i>Decision-making</i>	<i>Respect for the natural environment</i>
<i>Working independently</i>	<i>Showing social, professional and ethical responsibility and sensitivity to gender issues</i>
<i>Team work</i>	<i>Criticism and self-criticism</i>
<i>Working in an international environment</i>	<i>Production of free, creative and inductive thinking</i>
<i>Working in an interdisciplinary environment</i>	<i>.....</i>
<i>Production of new research ideas</i>	<i>Others...</i>
	<i>.....</i>

Working independently, team work, working in an interdisciplinary environment, working in an international environment

3. SYLLABUS

Lectures

1. General characteristics required for the packaging of cosmetic products.
2. General principles for the design of packaging items.
3. Legislative requirements and quality assurance of cosmetics packaging.
4. Types of packaging materials for cosmetic products (glass, plastics, metals).
5. Polymer chemistry (PE, HDPE, PS, PVC, COEX, PET).
6. Problems when using plastics as packaging materials.
7. Packaging of cosmetic products under pressure.
8. Propellant gases.
9. Corrosion of packaging materials over time and impurities (heavy metals, phthalates, allergens, etc.).
10. Stability-Compatibility testing of packaging materials.
11. Quality control of packaging materials in the production factories.
12. Latest trends - Technologies in packaging (Airless, Bag in Bottle, Bag-on-Valve).
13. Environmental issues.

4. TEACHING and LEARNING METHODS - EVALUATION

DELIVERY <i>Face-to-face, Distance learning, etc.</i>	Face-to-face	
USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY <i>Use of ICT in teaching, laboratory education, communication with students</i>	Use of ICT in teaching, Support of the learning process through e-class	
TEACHING METHODS <i>The manner and methods of teaching are described in detail. Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, placements, clinical practice, art workshop, interactive teaching, educational visits, project, essay writing, artistic creativity, etc. The student's study hours for each learning activity are given as well as the hours of non-directed study according to the principles of the ECTS</i>	Activity	Semester workload
	Lectures	60
	Educational visit	10
	Independent study	20
	Course total	90
STUDENT PERFORMANCE EVALUATION <i>Description of the evaluation procedure Language of evaluation, methods of evaluation, summative or conclusive, multiplechoice questionnaires, short-answer questions, open-ended questions, problem solving, written work, essay/report, oral examination, public presentation, laboratory work, clinical examination of patient, art interpretation, other Specifically-defined evaluation criteria are given, and if and where they are accessible to students.</i>	THEORETICAL PART FINAL WRITTEN EXAMINATION (100%): Multiple choice questionnaires, open-ended questions, characterization of sentences as True or False, problem solving Criteria are given	

5. ATTACHED BIBLIOGRAPHY

1. Raut E. and Shikh Z. Packaging of Cosmetics: A Review, J Pharm and Sci Innov 286-293 (2014)
2. Zhang J., Wang X., Gong Z. J Appl Pol Sci, 93: 1089 (2004)
3. Rawlins EA. Review on pharmaceutical packaging. Bentley's textbook of pharma
4. David F., Sandra P., Tienpont B., et al., The Handbook of Environment Chemistry, Analytical Methods Review, 3Q : p. 9 (Chapter 2), (2003)
5. Napawan Kananuluk (2004). Power of packaging. Bangkok Thailand :Love and lift Publisher
6. Ursula Klaschka Dangerous cosmetics - criteria for classification, labelling and packaging (EC 1272/2008) applied to personal care products, Klaschka Environmental Sciences Europe 24:37 (2012)
7. Chetna Sharon¹ and Madhuri Sharon. Studies on Biodegradation of Polyethylene terephthalate: A synthetic polymer, J. Microbiol. Biotech. Res. 2: 248-257 (2012)
8. Steven Sonsino : Packaging Design, Van Nostrand Reinhold, New York (1990)
9. FDA (US Food and Drug Administration) Regulation 21 CFR 175.105 Adhesives. US GPO, Washington, DC (2009)

10. T. Mitsui. New Cosmetic Science., Pages 235–247 (1997)

Suggested Journals

International Journal of Cosmetic Science, Journal of Cosmetic Science, Materials