Teaching guide

IDENTIFICATION DETAILS

Degree:	Pharmacy
Scope	Pharmacy
Faculty/School:	Experimental Sciences
Course:	COSMETICS
Type:	Optional
ECTS credits:	3
Year:	5
Code:	2564
Teaching period:	Ninth semester
Subject:	Pharmaceutical Technology
Module:	Pharmacy and Technology
Teaching type:	Classroom-based
Language:	Spanish
Total number of student study hours:	75

SUBJECT DESCRIPTION

The course will cover generalities of the skin and its aging, cosmetics for hygiene, hydration and facial and body treatment, decorative cosmetics, sun cosmetics, deodorants and antiperspirants, hair and oral cavity cosmetics, fragrances.

The cosmetics and dermatology sector is a constantly growing market that requires qualified professionals, among which the pharmacist, as a health professional, stands out as one of the main experts involved.
Beauty, well-being, health and body care are aspects that have always interested all sectors of society and all age groups, but which, currently, with the progressive aging of the population and the increase in life expectancy, have become part of our daily routine.
This course aims to bring the cosmetics industry closer to students, to give an overview of the different types of

cosmetic products, their characteristics, composition, specific regulations, manufacturing procedures and market trends. We will deepen our knowledge of the different raw materials, components and active ingredients and the different functions and uses of cosmetics (hygiene, hydration, aging...)

GOAL

The objective of this course is to transmit to the student the theoretical and practical foundations necessary for a basic knowledge of Cosmetics. It aims to publicize the main cosmetic products and their design and formulation, including biological and physiological aspects, issues related to their commercialization, fundamental legal concepts and regulations, to provide a global vision of the environment of cosmetic products.

PRIOR KNOWLEDGE

It is recommended to have knowledge of Human Physiology, Pathophysiology, Chemistry and Pharmaceutical Technology.

COURSE SYLLABUS

THEORETICAL PROGRAM:
UNIT 1. COSMETICS AND DERMOPHARMACY:
1. Cosmetics and Dermopharmacy: Concept and scope of application.
2. Physiology and structure of the skin and skin appendages. Epidermis. Dermis. Hypodermis. Skin functions. Skin appendages: Sweat glands. Sebaceous glands. Hair Nails Routes of skin penetration.
3. Cosmetic Forms. Galenic aspects, formulation and classification criteria. Powders. Solutions. Suspensions. Emulsions. Gels. Microemulsions. Dermocosmetic vectors: liposomes, nanoparticles, nanocapsules and nanospheres, microcapsules, ceramides, liquid crystals, cyclodextrins.
4. Functional and sensory analysis of cosmetic products.
5. Cosmetic ingredients. Components of mineral, vegetable, animal and synthetic origin. Active ingredients. Emollients. Emulsifiers. Surfactants. Solvents and co-solvents. Gelling agents, thickeners and rheological modifiers. Preservatives and stabilizers. Antioxidants Dyes and pigments. Perfumes. Solar filters. Other ingredients in cosmetics.
6. Classification and formulation criteria for cosmetic forms. Manufacture and development of cosmetic products. Evaluation of the safety and efficacy of a cosmetic product.
UNIT 2. BASIC DERMOCOSMETIC TREATMENTS
7. Skin typology: Classification. Determining factors. Methodology for its determination. Cosmetological care and cosmetic advice for every type of skin.
8. Hygiene and cleansing of the skin and hair. Types of dirt (intrinsic and extrinsic). Cleaning mechanisms. Soaps, syndets (dermatological breads), cleansing milks, gels, mousses, toners, exfoliants... Other hygiene products. Deodorants and antiperspirants. Oral and dental care products.
9. Hydration Hydration theory. Moisturizing active ingredients and their function on the skin.
10. Sun protection Biological effects of exposure to sunlight. Natural photoprotection (melanin, self-repair and

hyperkeratinization) and skin phototypes. External photoprotection: physical, chemical and biological filters. Solar formulations.
UNIT 3. SPECIFIC COSMETIC TREATMENTS.
11. Nutrition: Nutritional active ingredients, composition and effectiveness.
12. Anti-aging. Biochemical and physiological changes in the skin. Active ingredients useful in the prevention and treatment of wrinkles and skin aging.
13. Anti-pollution: Effects of pollution on the skin. Defense and protection of the skin. Active ingredients capable of neutralizing the harmful effects of pollutants.
UNIT 4. SKIN CHANGES
14. Atopic dermatitis.
15. Blemishes, skin hyperpigmentation and melanin changes.
16. Obesity and Cellulite.
17. Sagging and loss of elasticity.
18. Stretch marks.
19. Vasodilation. Couperose.
20. Acne.
21. Rosacea and sensitive skin.
UNIT 5. APPLIED COSMETICS
22. Hair cosmetics. Hair cycle. Structural alterations of the hair and scalp. Products for cleaning, styling, care and maintenance of hair. Dyes and bleaches. Shaving and depilatory products. Cosmetic forms used.
23. The perfume. Definition. History. Origin and raw materials used in its production. Olfactory notes and families. Compatibility and formulation.
24. Children's cosmetics. Differential characteristics of baby and child skin Dermocosmetic products for care and treatment. Specific products for the diaper area.
25. Men's facial cosmetics. Male skin physiology. Men's facial shave. Cosmetic technology for dermopharmaceutical products for men.
26. Decorative cosmetics. Face makeup. Cosmetics for the eyes. Lipstick. Nail polish
UNIT 6. PLACING COSMETIC PRODUCTS ON THE MARKET
27. Legislative framework and regulations for cosmetic and dermatological products
28. Marketing. Communication and Marketing Strategies in the Cosmetic Sector
INTERNSHIP PROGRAM:
Manufacture, control and conditioning of:
1. Emulsions.
2. Gels.
3. Micellar solutions.
4. Balms.
5. Nourishing oils.
6. Eguas de cologne

EDUCATION ACTIVITIES

FACE-TO-FACE ACTIVITY:
1.- THEORETICAL CLASSES (AFP1). Theory classes): They will be based on participatory master classes with video viewing, questions or discussions and case and problem workshops (planning and solving cases and

problems individually or in small groups). For this purpose, digitized teaching support materials will be used and will be disseminated through the Virtual Classroom of the student portal.
2.- PRACTICAL CLASSES (AFP2). Practical classes): Laboratory work sessions in small groups supervised by the teacher that consist of the development of different cosmetic forms. The process will conclude in each practice with the interpretation and analysis of the most relevant data and the execution of a practice notebook with issues related to the products developed. They are intended to consolidate the knowledge acquired in theoretical classes and seminars through their application.
3.- SEMINARS (AFP4). Seminars): Seminars will be held in the subject that students will have to prepare under the direction of the teacher, in order to present orally the results of the questions posed and submit them to debate. The application of knowledge is sought and the ability to gather, interpret and judge relevant information and data. It prioritizes the participation of students in the reasoned interpretation of knowledge and sources in the area of study, with the coordination of the teacher.
4.- TUTORING (AFP5.tutoring): Students will have time allotted for personalized tutoring to answer their particular questions, whenever they request it and schedule it by the teacher. The tutoring schedule can be consulted in the degree coordinator and will be informed by the teacher at the beginning of the course.
5.-EXAMS (AFP6). Taking exams): In order to evaluate the acquisition of the contents and competencies to be developed in the subject, written tests will be carried out to highlight the different knowledge and abilities acquired by students.
SELF-EMPLOYMENT/NON-FACE-TO-FACE ACTIVITY:
* AFNP1. Study of theory, exercises and problems: Consultation, reading and analysis of the information distributed through the student portal and the recommended documentation and bibliography. Preparation of exams.
* AFNP2. Preparation and study of practices: Research work and resolution of practical assumptions.
* AFNP3. Preparation of works: Preparation of works and exercises.

DISTRIBUTION OF WORK TIME

TEACHER-LED TRAINING ACTIVITIES	INDIVIDUAL WORK
35 Horas	40 Horas

Cross Skills

To nurture an attitude of intellectual curiosity and a quest for truth in all areas of life.

To be able to apply the theoretical knowledge learnt in the of solving problems and practical cases linked to the various subjects.

LEARNING RESULTS

Design, optimize and develop pharmaceutical forms while ensuring their quality, including the formulation and quality control of drugs, the development of master formulas and official preparations.

Know the physico-chemical and biopharmaceutical properties of the active ingredients and excipients as well as the possible interactions between the two.

Know the basic operations and technological processes related to the development and control of medicines.

SPECIFIC LEARNING RESULTS

Know and understand the techniques used for the design, formulation, manufacture and control of cosmetic products.

Identifies the different ingredients used in cosmetics and recognizes their activity-function within the cosmetic form.

Apply the scientific method and demonstrate skills in managing legislation, sources of information, bibliography, development of protocols and other aspects that are considered necessary for the design, manufacture and control of cosmetic products.

Describe and analyze the characteristics and applications of the main cosmetic products, and the mechanism of action by which they achieve their effect.

He knows the pathologies frequently seen in the pharmacy office related to cosmetics and dermopharmacy and can recommend and advise different cosmetic products.

LEARNING APPRAISAL SYSTEM

A continuous evaluation process will be carried out that will contribute 17.5% to the final grade and will take into account the following aspects:
- IF 3. Individual and group works: Content and presentation of the monographic works and resolution of proposed problems (15%)
- IF 4. Attendance and participation in face-to-face classroom classes: Participation in theoretical classes, seminars and individual/collective tutoring (2.5%)
With regard to laboratory practices (22.5%), the following aspects will be evaluated:
- IF 8. Attendance and participation in face-to-face activities in the laboratory: knowledge acquired in the practical classes carried out in the laboratory through the control of the work done day by day by the student (2.5%)
- IF 2. Daily activities and exercises: Resolution of the issues raised in the different practices and the revision of the laboratory notebook (20%).
In addition, tests will be carried out to evaluate the assimilation of theoretical knowledge and the ability to resolve practical assumptions. Your rating will contribute to the overall score by 60%.
- IF 1. Written or oral developmental, short answer or test-type tests: Eliminatory partial exams and/or a final exam will be carried out.
The final exam will be a written test aimed at evaluating students' knowledge of all the subject taught in the subject.
• ORDINARY CALL: In the ordinary call, the corresponding global exam will be held, to which all students enrolled in the subject can take. In this case, the average score of this exam must be greater than or equal to 5.0 out of 10.0 in order to be able to apply the remaining participation, work and internship percentages, where appropriate.

• EXTRAORDINARY CALL: The student who does not pass the subject in the ordinary call must take the final exam of the extraordinary call with all the subject matter.
PRACTICES: Attendance at all practical sessions (regardless of where they take place: laboratory, computer rooms, simulation tunnel, etc.) is mandatory. The unjustified absence of any of these sessions leads to the loss of the right to an internship evaluation in the ordinary call and a suspension of the course. Students in this situation should immediately contact the teacher. Therefore, completing and passing the evaluation of practices is a necessary condition for passing the subject (greater than or equal to five points out of ten).
MINIMUM REQUIREMENTS TO PASS THE COURSE: To pass the subject, it is a necessary condition that, after applying the corresponding percentages to each of the parameters to be evaluated, the final grade is greater than or equal to 5 out of 10. If a student does not achieve that grade, they must take the extraordinary call exam.
CLASS ATTENDANCE:
THEORETICAL CLASSES: In order to take the partial exams, 80% of theory classes must be attended (attendance checks will be carried out daily). Since the student may miss 20% of the total number of classes, no justification for absence will be accepted.
PRACTICAL CLASSES: Attendance at practical classes is 100% mandatory.
PLAGIARISM: Plagiarism, as well as the use of illegitimate means in evaluation tests, will be sanctioned in accordance with the provisions of the Evaluation Regulations and the University's Coexistence Regulations
FINAL EVALUATION OF THE STUDENT.
ORDINARY EVALUATION SYSTEM: This is the priority system applicable to all students. It is based on continuous evaluation.
PARAMETERS TO BE EVALUATED Participation in theoretical classes and attitude in class 2.5% Laboratory Practices 22.5% Exam 60% Papers 15%
FINAL GRADE OF THE SUBJECT 100% Students who enroll for the second or more times in this subject should contact the teacher to find out about the specific evaluation criteria in their case. Due to the specific nature of laboratory practices, for the second ordinary call, the grades already obtained in the first call will be taken into account and duly weighted.
FINAL EVALUATION OF THE STUDENT.
ALTERNATIVE EVALUATION SYSTEM: In the case where there are repeat students who do not take advantage of the ordinary evaluation system, because they are unable to attend classes on a regular basis, the alternative evaluation system will be as follows:
PARAMETERS TO BE EVALUATED Practical Questions 15% Exam 70% Papers 15%
In any case, students in second or subsequent enrollment must contact the teacher to request to take advantage of this system.

ETHICAL AND RESPONSIBLE USE OF ARTIFICIAL INTELLIGENCE

1.- The use of any Artificial Intelligence (AI) system or service shall be determined by the lecturer, and may only be used in the manner and under the conditions indicated by them. In all cases, its use must comply with the following principles:
a) The use of AI systems or services must be accompanied by critical reflection on the part of the student regarding their impact and/or limitations in the development of the assigned task or project.
b) The selection of AI systems or services must be justified, explaining their advantages over other tools or methods of obtaining information. The chosen model and the version of AI used must be described in as much detail as possible.
c) The student must appropriately cite the use of AI systems or services, specifying the parts of the work where they were used and describing the creative process followed. The use of citation formats and usage examples may be consulted on the Library website(https://www.ufv.es/gestion-de-la-informacion_biblioteca/).
d) The results obtained through AI systems or services must always be verified. As the author, the student is responsible for their work and for the legitimacy of the sources used.
2.- In all cases, the use of AI systems or services must always respect the principles of responsible and ethical use upheld by the university, as outlined in the Guide for the Responsible Use of Artificial Intelligence in Studies at UFV. Additionally, the lecturer may request other types of individual commitments from the student when deemed

necessary.
3.- Without prejudice to the above, in cases of doubt regarding the ethical and responsible use of any AI system or service, the lecturer may require an oral presentation of any assignment or partial submission. This oral evaluation shall take precedence over any other form of assessment outlined in the Teaching Guide. In this oral defense, the student must demonstrate knowledge of the subject, justify their decisions, and explain the development of their work.

BIBLIOGRAPHY AND OTHER RESOURCES

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