SYLLABUS

1. Course title:

Application of polymers in cosmetology

2. Code:

3. Cycle of study:

I

4. ECTS credits:

3

5. Type of course:

Elective

6. Prerequisites:

-

7. Class restrictions:

-

8. Duration / semester(s):

1 | II

9. Weekly contact hours and student workload:

Semester (1)	II	Semester (2)		(for two-semester courses)	Workload: (hours)
9.1. Lectures	2			Classes:	22.50
9.2. Seminars	0			Individual work:	60.75
9.3. Laboratory / Practice classes	0			In total:	83.25

10. Faculty:

Faculty of Pharmacy

11. Department/study program:

Cosmetology

12. Lecturer:

PhD. Merima Ibišević, assistant professor

13. Course aims:

Upon completion of this course, students will be able to:
- understand the basic functions and applications of polymers as excipients in cosmetic formulations;
- identify the different types of polymers used in cosmetics, as well as their specific characteristics and advantages in

formulations;
- apply knowledge of polymers in the design of cosmetic products;
- develop the ability to select appropriate polymers for different types of cosmetic products (creams, lotions, shampoos, gels, etc.).
- understand the impact of polymers on the safety and efficacy of products, including their interaction with the skin.
- become familiar with legislative and ethical guidelines related to the use of polymers in cosmetics.

14. Learning outcomes:

- To expand knowledge about the application of polymers in the cosmetic industry, with special emphasis on their role as excipients.
- To enable students to recognize the key characteristics of polymers that affect the quality of cosmetic products.
- To develop the ability to analyze and select polymers for the formulations of various cosmetic products in accordance with the needs of the market and consumers.
- To refresh knowledge about ethical and legal regulations related to the use of polymers in cosmetics.
- To provide students with a basis for further research in the field of polymer applications in the development of new cosmetic products.

15. Course content:

Application of polymers in cosmetology
- Polymers as active and auxiliary substances in cosmetology
- Packaging materials in cosmetology
- Application of cellulose derivatives in cosmetology, examples of formulations
- Viscosity adjusting agents in cosmetology, examples of formulations
- Application of alginic acid in cosmetology
- Application of gelatin in cosmetology
- Application of collagen
- Creams and lotions: Polymer emulsifiers and stabilizers
- Shampoos and conditioners: the role of polymers in hair conditioning
- Gels and masks: polymeric agents for gel formation and improving functionality
- Sunscreen and UV protection products: polymer films and protective components
- Safety standards for the use of polymers in cosmetic products
- Polymer biocompatibility testing
- Impact of polymers on skin health and possible irritations or allergies
- Regulation on the use of polymers in cosmetics
- Personalization of cosmetic products using specific polymers
- Innovations in formulations with polymers (e.g. polymers for controlled release of active ingredients)

16. Learning methods:

Lectures, consultations, seminar papers.

17. Assessment methods:

Activity - through attendance at lectures, a student can earn 0-10 points
Seminar paper - by writing and defending a seminar paper, a student can earn 40 points
Final exam - knowledge testing involves unifying the entire material covered.
The maximum number of points a student can earn on the final exam is 50, and 25 points are required to pass.

18. Assessment components:

The student's final success after all the foreseen forms of knowledge testing is evaluated and graded as follows: 10 (A)-95-100 - exceptional success without mistakes or with minor mistakes,
9 (B)-85-94 -above average, with some errors, 8 (C)-75-84 -with noticeable errors,
7 (D)-65-74 - generally good, with significant defects, 6 (E)-54-64 - meets the minimum criteria,
5 (F,FX)<54 - does not meet minimum criteria.

19. Mandatory reading list:

Mazić S. Kozmetologija I - savremene kozmetičke sirovine. Beograd, 2011.
G. Vuleta. Farmaceutska tehnologija I, Beograd, 2012.

20. Additional reading list:

21. Web sources:

22. Applicable from the academic year:

2025./26.

23. Adopted in the Faculty/Academy session: