SYLLABUS

1. Course title:

APPLICATION OF POLYMERS IN PHARMACY

2. Code:

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3. Cycle of study:

1

4. ECTS credits:

2

5. Type of course:

○ Mandatory ◉ Elective

6. Prerequisites:

There are no prerequsites for studing this subject.

7. Class restrictions:

None.

8. Duration / semester:

1 6

9. Weekly contact hours:

	Semester (1)	Semester (2)
	6	6
9.1. Lectures:	2	
9.2. Seminars:	0	
9.3. Laboratory/Practice classes:	0	

10. Faculty:

Faculty of Pharmacy

11. Department/study program:

Pharmacy (integrated 1st and 2nd cycles)

12. Lecturer:

Merima Ibišević, PhD; Assistant professor

13. Lecturer's e-mail:

merima.ibisevic@untz.ba

14. Web site:

www.frmf.untz.ba

15. Course aims:

Providing the necessary knowledge about the formation, structure, physico-chemical properties and behavior of natural and synthetic polymers that are used in the pharmaceutical industry. The properties of specific macromolecules essential for modern forms of medicine are highlighted, the effects that can be achieved by their application, the possibility of interaction, as well as the way of their decomposition are shown.

16. Learning outcomes:

By successfully mastering this subject, students will get the necessary general knowledge about polymers and their properties important for application in pharmacy.

17. Course content:

1. General about polymers, basic divisions, types
2. Polymerization processes
3. Polymer materials
4. Plastomers, duromers and elastomers
5. Natural polymers
6. Application of PE, PP, PVC, PTFE, PC in pharmacy and medicine
7. Application of starch in the pharmaceutical industry
8. Use of cellulose derivatives in the pharmaceutical industry
9. Application of cyclodextrin in pharmacy
10. Application of polymers in the production of dispersion systems
11. Application of polymers in the cosmetic industry
12. Application of polymers in the production of ophthalmic preparations
13. Use of polymers in transdermal formulations
14. Resins and rubber
15. Biodegradable polymers

18. Learning methods:

Lectures, consultations, seminar papers.

19. Assessment methods:

Activity - through attendance at lectures, a student can earn 0-10 points
Seminar paper - by creating and defending a seminar paper, a student can win 40 points
The final exam - the knowledge check implies the consolidation of the entire material covered. The maximum number of points that a student can get on the final exam is 50, and 30 points are required to pass.

Activity 0-10 points
Seminar paper 25-40 points
Final exam 30-50 points

20. Assessment components:

10 (A)-95-100 -outstanding performance without errors or with minor errorss
9 (B)-85-94 -above the average, with some errors
8 (C)-75-84 -average, with noticeable errors
7 (D)-65-74 -generally good, but with significant shortcomings
6 (E)-55-64 -meets the minimum criteria
5 (F,FX)<55 -does not meet the minimum criteria

21. Required reading list:

Merima Ibisevic - authorized lectures
G. Vuleta. Farmaceutska tehnologija I, Beograd, 2012.

22. Web sources:

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23. Applicable starting from the academic year:

2023/2024

24. Adopted in the Faculty/Academy session:

17.11.2025.