SYLLABUS

1. Course title:

APPLICATION OF POLYMERS IN PHARMACEUTICAL INDUSTRY

2. Code:

3. Cycle of study:

1

4. ECTS credits:

3

5. Type of course:

○ Mandatory ◉ Elective

6. Prerequisites:

7. Class restrictions:

8. Duration / semester:

1 7

9. Weekly contact hours:

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:

dr. sc. Zahida Ademović, assoc. prof.

13. Lecturer's e-mail:

zahida.ademovic@untz.ba

14. Web site:

www.farmacy.untz.ba

15. Course aims:

Providing the necessary knowledge on the formation, structure, physical and chemical properties and behavior of natural and synthetic polymers that have application in the pharmaceutical industry. Particularly emphasised are characteristics of specific macromolecules essential for modern medicament forms, their effects that can be achieved by application, the ability to interact and degradation mechanism.

16. Learning outcomes:

After successful completion of this course, students will get the necessary general knowledge of polymers and their properties important for applications in pharmaceutical and medical industry.

17. Course content:

1. Introduction to the polymers, the basic classification, types
2. Processes of polymerization
3. Polymer Materials
4. Mechanical, chemical and thermal properties of the polymer materials
5. Thermoplastics
6. Thermoset Plastics and Elastomers
7. Application of PE, PP, PVC, PTFE, PC in pharmacy and medicine
8. Natural polymers, properties
9. Polysaccharides
10. Proteins
11. The use of natural polymer in the pharmaceutical and medicine
12. Biodegradable polymers
13. Use of PLA, PGA and their copolymers in pharmacy and medicine
14. Advantages and disadvantages of the polymer use

18. Learning methods:

Lectures, consultations, seminars

19. Assessment methods:

Activity - through attendance at lectures student can obtain 0-10 points
Seminar - creating and defending seminary work student can obtain 40 points
Final exam - assessment implies the unification of the entire subject. Maximal number of points that a student can obtain on the final exam is 50, for the pass the exam necessary is 25 points.
In order for the student to pass the course, minimum is 51 points.

20. Assessment components:

Rating exam is based on the total number of points, the maximum score is 100. The number of points is determined according to the following scale:
Activity 0-10
Seminar 20-40
Final Exam 25-50

21. Required reading list:

1. Z. Janovic, Polimerizacije i polimeri, HDKI-Kemija u industriji, zagreb, 1997
2. B. Andričić, Prirodni polimerni materijali, Priručnik, Sveučilište u Splitu, Split, 2008

22. Web sources:

23. Applicable starting from the academic year:

2012/2013

24. Adopted in the Faculty/Academy session: