SYLLABUS

1. Course title:

Pharamceutical technology and biopharamcy

2. Code:

3. Cycle of study:

3

4. ECTS credits:

15

5. Type of course:

(•) Mandatory ( ) Elective

6. Prerequisites:

7. Class restrictions:

8. Duration / semester:

1 2

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:

Pharmaceutical sciences

12. Lecturer:

Vera Kerleta-Tuzović, assistant profesor

13. Lecturer's e-mail:

vkerleta@gmail.com

14. Web site:

www.farmacy.untz.ba

15. Course aims:

Acquiring knowledge on the principles of preformulation and formulation research in pharmaceutical technology and biofarmacy. Obtaining special knowledge in the field: nanoparticles; surfactants; Biopharmaceutical considerations of different routes of drug administration; Biomemoration and Biotransformation Through Drugs; Cosmetic formulations; Dosage forms with modified release; Strategies for designing orally disintegrating formulations

16. Learning outcomes:

General knowledge on the principles of preformulation and formulation research in pharmaceutical technology and biofarmacy. Special knowledge in the field: nanoparticles; surfactants; Biopharmaceutical considerations of different routes of drug administration; Biomemoration and Biotransformation Through Drugs; Cosmetic formulations; Dosage forms with modified release; Strategies for designing orally disintegrating formulations

17. Course content:

Importance of preformulation research in the developmental phase of a medicinal form
surfactants; Their use in cell cultures and for targeted delivery of the active substance; Nanoparticles: production and characterization
Bio-pharmaceutical considerations for the evaluation of topical and transdermal drugs;
Biopharmaceutical considerations in estimating buccally administered drugs
ADME concept: the passage of drugs through biomembranes; Biotransformation of drugs
Cosmetic formulations
The influence of hydrogel drug release formulations on dosage forms with modified release.
Formulation and Evaluation of Solid Oral Dosage Forms with Modified Release.
Strategies in designing orally disintegrating formulations.

18. Learning methods:

Lectures using multimedia
Students prepared essays on given topics

19. Assessment methods:

After the course is completed students are obliged to take an exam which covers the material presented during the course. The test consists of the section with multiple choice questions, and the section with the essay questions. Correct answer is worth 5 points, for multiple choice question, and 10 points for essay question.

20. Assessment components:

The exam is worth 100 points total, with 90 points worth for questions and 10 points worth for student's activity during lectures.

21. Required reading list:

Rudolf Voigt (2000), Pharmazeutische Technologie, DAV Stuttgart
2. Sabira Hadžović (2005), Farmaceutska tehnologija: Industrijska farmacija, MAG Plus, Sarajevo
3. Langner, Borchert, Mehnert (2010), Biopharmazie,WVG Stuttgart

22. Web sources:

23. Applicable starting from the academic year:

2012/13.

24. Adopted in the Faculty/Academy session: