SYLLABUS

1. Course title:

INSTRUMENTAL PHARMACEUTICAL ANALYSIS

2. Code:

3. Cycle of study:

1

4. ECTS credits:

5

5. Type of course:

(●) Mandatory ( ) Elective

6. Prerequisites:

NONE

7. Class restrictions:

NONE

8. Duration / semester:

1 4

9. Weekly contact hours:

9.1. Lectures:	3
9.2. Seminars:	0
9.3. Laboratory/Practice classes:	2

10. Faculty:

Faculty of pharmacy

11. Department/study program:

Pharmacy (Integrated study I and II cycle)

12. Lecturer:

Dr.sc. Amra Selimović, assistant professor

13. Lecturer's e-mail:

amra.selimovic@untz.ba

14. Web site:

www.frmf.untz.ba

15. Course aims:

The aim of this course is to introduce the theoretical principles and practical experience in the use of some of the most important instrumental methods of chemical analysis.

16. Learning outcomes:

Understanding and mastering some instrumental methods of analysis.

17. Course content:

Introduction to curriculum, instruction work. Introduction. Division of Analytical Methods. Parameters of analytical determination. Calibration. Electroanalytical metode.Potenciometrija. Coulometry. Voltammetry. Introduction to Spectrometry. The atomic spectrometry (AAS, EAS, FAS). Molecular spectroscopy (UV, visible, IR, FMA). NMR. Mass spectrometry. Separation methods. The division and the basic principles of chromatographic methods. Chromatographic methods.

18. Learning methods:

Lectures will cover the entire material provided by the curriculum. The presence of students in class is required, which will be kept by signing or polling. Working material from the lectures will be available to students.
Experimental work will take place in the following cycles: electroanalytics, calibration methods, qualitative and quantitative analysis in visible spectrometry, determining the structure of a compound of the UV / Vis, IR, NMR and MS techniques and chromatography.

19. Assessment methods:

Within the hourly rate of experimental exercises will be held on two tests: the first (for 45 minutes) with the theme of calculating the concentration of calibration techniques and others (for 45 minutes) with the theme of making tasks in the field of potentiometric titration. The colloquium is taken after completion of the cycle of exercises.
Assessment will be carried out through three partial exams: the first with the material from the calibration method, Electroanalytic method; the second material in the field of spectrometry, and the third method in the field of separation and chromatography.

(Part 1) Pre Activity:
Attendance at lectures: max. points 5 minutes. 5 points
Experimental exercises: max. points 15 min. 10 points
I Colloquium: max. points 5 minutes. 3 points
II Colloquium: max. points 5 minutes. 3 points
TOTAL: max. points 30 min. 21 points

20. Assessment components:

I partial: max. points 20 min. 12 points
II partial: max .bodova 30 min. 17 points
III partial: max. points 20 min. 12 points

21. Required reading list:

D.A. Skoog, F.J.Holler,T.A.Neiman, Principles of Instrumental Analysis, Saunders College Publishing, Chicago,1992.
D.A.Skoog, D.M.West, F.J.Holler, Osnove analitičke hemije (prijevod:N.Kujundžić, V.Živčić-Alegretti,A.Živković), Školska knjiga, 1999.

22. Web sources:

23. Applicable starting from the academic year:

2012/13

24. Adopted in the Faculty/Academy session: