SYLLABUS

1. Course title:

RESEARCH METHODOLOGY WITH BIOSTATISTICS

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 9

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 cycle)

12. Lecturer:

dr. sc. Aida Smajlović, associate professor

13. Lecturer's e-mail:

aida.smajlovic@untz.ba

14. Web site:

www.frmf.untz.ba

15. Course aims:

To introduce the students to the technique of writing a diploma thesis.

16. Learning outcomes:

Acquisition of knowledge and understanding of research methodology (formulating the problem and the basic idea of the research, setting the hypothesis and goals, correctly presenting the results, discussion and conclusions).

17. Course content:

-Introduction to research methodology: History
-Data analysis
- Basic epidemiological measures
-Hypothesis
- Hypothesis testing
-Research validity: Systematic and random errors
-Control of interfering variables
-Types of research
-Pair research and cross-sectional study
-Cohort research
- Experimental design
- Selection of statistical tests
- Structure of a scientific article and types of publications
- Research planning with seminar work
-Analysis of seminar papers

18. Learning methods:

Lectures, seminar papers.
The course "Research methodology with biostatistics" has a pool of 30 hours of theoretical classes and seminars. Students are required to attend lectures and actively participate in them through discussion.
The student's seminar work is mandatory as a group team project.

19. Assessment methods:

Lecture (L): Regular attendance: 5 points. min 2
Class activity: 5 points. min 2
During the lecture, the student actively participates through the discussion in the lecture. During the course of the lecture, he can achieve a maximum of 5points based on the activity. Based on the activity in the lecture, it is mandatory to collect a minimum of 2,5 points. During the course of the semester, the student takes 2 tests (2 partial exams), which include the entire theoretical course from the subject Research methodology with biostatistics. The first partial test covers the theoretical lessons: Introduction to research methodology: History, Data analysis, Basic epidemiological measures, Hypothesis, Hypothesis testing, Research validity: Systematic and random errors, Control of interfering variables, Types of research, Pair research and cross-sectional study, Cohort research, Experimental design, Selection of statistical tests, Structure of a scientific article and types of publications, Research planning with seminar work, Analysis of seminar papers. Test is worth a maximum of 75 points. The minimum number of points that must be achieved on the test is 41.
During the semester, the student takes final exam, which includes theoretical lessons from the subject Research Methodology with Biostatistics, and it refers to the knowledge vertification from the test that was not taken in the regular term.
Student's seminar paper: the student is obliged to do one seminar paper as a group project. A successfully prepared and defended seminar paper is evaluated with a maximum of 15 points. The minimum number of points that must be achieved in the seminar work is 9 points. The number of points obtained on the basis of the completed seminar work is added to the total number of points obtained on other bases in the formation of the (final) grade.

20. Assessment components:

Scored number of points	Grade (BiH)	(ECTS grade)
< 55	5 (five)	F
55-64	6 (six)	E
65-74	7 (seven)	D
75-84	8 (eight)	C
85-94	9 (nine)	B
95-100	10 (ten)	A

21. Required reading list:

1. Marušić M. Uvod u znanstveni rad u medicini, Medicinska naklada, Zagreb
2. Ristanović D i Dačić M. Osnovi metodologije naučnoistraživačkog rada u medicini, Velarta, Beograd
3. Babuš V. Epidemiološke metode, Medicinska naklada, Zagreb

22. Web sources:

23. Applicable starting from the academic year:

2018/2019.

24. Adopted in the Faculty/Academy session:

17.11.2025.