SYLLABUS

1. Course title:

Chemistry of antiviral drugs

2. Code:

3. Cycle of study:

1

4. ECTS credits:

2

5. Type of course:

○ Mandatory ◉ Elective

6. Prerequisites:

NONE

7. Class restrictions:

NONE

8. Duration / semester:

1 8

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 study I and II cycle)

12. Lecturer:

Dr.sc. Amra Džambić, assistant professor

13. Lecturer's e-mail:

amra.dzambic@untz.ba

14. Web site:

www.frmf.untz.ba

15. Course aims:

The student will get to know the properties of drugs from the group of antiviral drugs as well as drugs used in the treatment of colds and flu, get acquainted with the structural formulas, physical and chemical properties of drugs, ways of obtaining drugs (isolation, biosynthesis and synthesis) for selected drugs; the influence of the structure of the drug on the mechanism of action (the relationship between structure and
action) for the group of antiviral drugs as well as drugs used in the treatment of colds and flu.

16. Learning outcomes:

-Identification of a specific group of drugs, physical and chemical properties,
- Identify and determine the parts of the molecule that are essential for action,
- Describe the mechanism of action, use and method of administration of drugs based on their structure,
- Determine the methods and routes of drug synthesis.

17. Course content:

Viruses-causing local and systemic infections in humans, Antivirals, natural and synthetic, mechanism of action, Antivirals for local and systemic use, Neuraminidase inhibitors,
Other drugs used in the treatment of viral infections: Analgoantipyretics, Direct sympathomimetics, Indirect sympathomimetics, Drugs in the treatment of complications of flu and colds, Other preparations that can be used to improve the treatment of viral infections.

18. Learning methods:

Oral lectures - mandatory attendance
Interactive teaching - active participation during lectures, repetition of material, solving specific problems and cases.
Case presentation and treatment of viral infections,
Seminar papers on the assigned topic.

19. Assessment methods:

Knowledge assessment consists of Activities, lecture attendance and taking two tests during the semester
Activity: 6 - 10 points;
Seminar paper: 7-10 points
Test I: Viruses - causative agents of local and systemic infections in humans, Antivirals, natural and synthetic, mechanism of action, Antivirals for local and systemic use, Neuraminidase inhibitors. 21-40 points
Test II: .Other drugs used in the treatment of viral infections: Analgesics, Direct sympathomimetics, Indirect sympathomimetics, Drugs in the treatment of complications of influenza and colds, Other preparations that can be used to improve the treatment of antiviral infections. 21-40 points
Test I and Test II will be conducted during the lecture, and the final exam will be held after the end of the semester.

20. Assessment components:

The exam grade is based on the total number of points that the student has earned by fulfilling the pre-exam requirements and taking the exam, and according to the quality of the acquired knowledge and skills and contains a maximum of 100 points, and is determined according to the scoring scale: Seminar paper: 6-10, Lecture activity: 7-10, Test I: 21-40, Test II: 21-40 points.
Total:
10 (A) - 95-100 points,
9 (B) - 85-94 points,
8 (C) - 75-84 points,
7(D) - 65-74 points;
6 (E) - 55-64 points,
5 (F) - less than 55 points.

21. Required reading list:

Farmaceutska kemija 1, Završnik D. Muratović S. Špirtović-Halilović S. Veljović E. Osmanović Bojić M. Medić-Šarić- M. Sarajevo 2015.
Wilson C, Gisvold O. Block J. Beale J. Wilson: Gisvold's s textbook of organic medicinal and pharmaceutical chemistry

22. Web sources:

William Foye, Thomas Lemke, David Williams; Principles of Medicinal Chemistry; , Willams & Wilkins, Baltimore, USA
Textbook of Organic medicinal chemistry

23. Applicable starting from the academic year:

2023/2024.

24. Adopted in the Faculty/Academy session:

17.11.2025.