SYLLABUS

1. Course title:

Immunochemistry and the basic immunology

2. Code:

3. Cycle of study:

2

4. ECTS credits:

3

5. Type of course:

(•) Mandatory ( ) Elective

6. Prerequisites:

It is imperative to attend laboratory exercises

7. Class restrictions:

no

8. Duration / semester:

1 9

9. Weekly contact hours:

9.1. Lectures: 2

9.2. Seminars: 0

9.3. Laboratory/Practice classes: 1

10. Faculty:

Faculty of Pharmacy

11. Department/study program:

Pharmacy (Integrated I and II Cycles)

12. Lecturer:

Adaleta Softić, associate professor

13. Lecturer's e-mail:

adaleta.mulaomerovic@untz.ba

14. Web site:

15. Course aims:

- Introduction to modern immunochemical methods used in research and practice
- Meeting the principle of immune response at the molecular level

16. Learning outcomes:

At the end of the semester, successful students, who continued to perform their duties throughout the course of the course, will be able to: recognize the basic immune techniques, to know their diagnostic application and application in assessing the patient's health status after the therapy is applied. In addition, through applied methods, students develop lab skills.

17. Course content:

General overview of the immune system; The innate immune system; Acquired immunity; Cells involved in immune response / hematopoietic organs; B cell receptors and antibodies; Major Histocompatibility Complex; Antigen Presentation; T cell receptors and coreceptors; Maturation, Activation and Differentiation of T and B Cells; Cytokines, complement, cellular immune response.
An antigen-antibody reaction; Production of monoclonal and polyclonal antibodies; Immunohistochemical Techniques; Immunofluorescence; Proximity ligation assay; Chromatin immunoprecipitation; Western blotting; ELISA; xMAP technology; ELISPOT assay; Radioimmunoassay; Flow Cytometry; Techniques based on agglutination; Techniques based on precipitation; Lymphocyte population isolation methods; Techniques for testing the function of effector cells.

18. Learning methods:

- lectures
- practical work (individual and group work)
- demonstration of new experimental methods

19. Assessment methods:

- Written tests
- Colloquium
- Evaluation of activities during lectures and laboratory exercises

From the theoretical part, students will work 2 written tests to round off the correct answer, supplement the sentences or clarify the schemas.

Colloquium implies a written examination of the knowledge pertaining to the course presented in the exercises.

At the lectures and exercises, students' activity will be monitored through individual and group work of students.

The final grade represents the sum of the achieved points from 2 partial exams, colloquia, attendance of lectures and activities in lectures and exercises.

Creating Final Score:
Based on the regularity of attendance, it is necessary to achieve at least 1 point. The maximum number of points on this basis is 5.
The student is obliged to achieve at least 1 point through continuous activity at the lectures. The maximum number of points on this basis is 5.
Based on activity at laboratory exercises, the student is required to achieve a minimum of 1 point. The maximum number of points on this basis is 5.

The first partial exam is 30 points. The minimum to be achieved by a student is 18.
The second partial exam carries 40 points. The minimum to be achieved is 24.

The number of points which carries colloquium is 15. The minimum student needs to achieve is 9 points.
The points achieved on all bases, defined by the silabus, are calculated and based on the total number of points the (final) score is formed.

20. Assessment components:

0-53 Five (5) «Not satisfied» «F»
54-63 Six (6) «Sufficient» «E»
64-73 Seven (7) «Good» «D»
74-83 Eight (8) «Very good» «C»
84-93 Nine (9) «Extraordinary» «B»
94-100 Ten (10) «Excellent» «A»

21. Required reading list:

Softić A, Immunohemic Techniques, Sorelli, Tuzla 2017
Abbas AK, Lichtman AH, eds. Basic Immunology.2nd ed. Philadelphia, Elsevier Saunders, 2006.
Adaleta Softić-Authorized Lectures
Mulaomerović A Begic L, Practicum for exercises in Immunohistochemistry with the basics of immunology

22. Web sources:

23. Applicable starting from the academic year:

2012/13

24. Adopted in the Faculty/Academy session: