AMENDMENTS AND CHANGES TO THE CURRICULUM IN THE EDUCAIONAL DISCIPLINE «MICROBIOLOGY, VIROLOGY, IMMUNOLOGY» FOR THE SPECIALTY 1-79 01 01 «GENERAL MEDICINE» 2023-2024 ACADEMIC YEAR

Amendments and changes	Basis/Reason
1. No changes were made to the thematic plan and educational discipline curricular chart	Educational Plan for 2023/2024 academic year
2. No changes were made to the academic discipline curricular chart and the list of lectures and practical studies	Schedule of sessions for the 2023-2024 academic year
3.The list of practical skills has been updated according to Appendix № 1	Department meeting of June 08, 2023, protocol No. 13
3. The list of literature recommended for 2023-2024 academic year has been updated (Appendix № 2)	Department meeting of June 08, 2023, protocol No. 13
4. The content of the topics «Antimicrobial measures: methods of sterilization and disinfection, antiseptics, asepsis», and of the section «Clinical microbiology» has been updated and the following information has been added: Ensuring epidemiological safety in the provision of medical care	Письмо Министерства здравоохранения Республики Беларусь № 4-38/7173 от 06.04.2023 «О выполнении плана мероприятий»
5. The content of the topics «Ecology of microorganisms. Methods of human normal flora investigation» and «Clinical microbiology. Methods for diagnosis of purulent-septic infections of the skin, subcutaneous tissue, sepsis» has been updated and the following data have been added: act of implementation of the results of students' scientific research *"Microflora of appendicular peritonitis in pediatric patients" (authors Savastyuk A. E., Alzoba D.)"*	Act of implementation of the results of scientific research in the educational process (protocol of the meeting of the department No. 2 dated 09.09.2022)
6. The content of the topics «Methods of clinical and infectious immunology. Cellular immune response. Allergy and ecological immunology» and «Methods for virological diagnosis of diseases caused by orthomyxoviruses, paramyxoviruses, coronaviruses, rubiviruses» has been updated and the following data have been added: act of implementation of the results of students' scientific research *"Features of the dynamics of indicators of cellular and humoral immunity after a coronavirus infection" (authors Chuprik N.N., Zhdanova E.S.)*	Act of implementation of the results of scientific research in the educational process (protocol of the meeting of the department No. 2 dated 09.09.2022)

7. The content of the topics «Special medical microbiology. Methods for microbiological diagnostics of diseases caused by staphylococci, streptococci, Neisseria» and «Methods of virological research. Bacteriophages» has been updated and the following data have been added: act of implementation of the results of students' scientific research "Sensitivity to antibiotics and to a polyvalent bacteriophage of lecithinase-positive staphylococci isolated from students of a medical university" (Strok I.V., Pikulova V.S.)	Act of implementation of the results of scientific research in the educational process (protocol of the meeting of the department No. 5 dated 10.05.2022)
8. The content of the topic «Methods for virological diagnosis of diseases caused by hepatitis viruses, herpesviruses, adenoviruses» has been updated and the following data have been added: act of implementation of the results of students' scientific research "Manifestations of the epidemic process of viral hepatitis B and C in Minsk" (author Apanovich A.V.);	Act of implementation of the results of scientific research in the educational process (protocol of the meeting of the department No. 5 dated 10.05.2022)
9. The content of the topic «Methods for microbiological diagnostics of acute intestinal infections caused by enterobacteria» has been updated and the following data have been added: act of implementation of the results of students' scientific research "Epidemiological aspects of rotavirus and salmonella infections during the COVID-19 pandemic" (Dobrovolskaya E.N.)	Act of implementation of the results of scientific research in the educational process (protocol of the meeting of the department No. 5 dated 10.05.2022)
10. The content of the topic «Basics of clinical immunology. Methods of determination and estimation of the immune status. Immunopathology» has been updated and the following data have been added: act of implementation of the results of students' scientific research "Diagnostic aspects in patients with acute demyelinating polyneuropathy associated with coronavirus infection" (Grigorash M.A., Murashko M.A.)	Act of implementation of the results of scientific research in the educational process (protocol of the meeting of the department No. 5 dated 10.05.2022)
11. The content of the section «Special medical virology» has been updated and the following data have been added: acts of implementation of the results of students' scientific research "Features of the epidemiology of rabies infection in the Republic of Belarus from 2013 to 2021" (author Stashkevich A.N.), "Assessment of risk factors affecting the severity of post-covid syndrome" (Nevmerzhitsky V.S., Shilo A.A.)	Act of implementation of the results of scientific research in the educational process (protocol of the meeting of the department No. 5 dated 10.05.2022)
12. The content of the section «Special medical virology» has been updated and the following data have been added: act of implementation of instructions for use "Method for detecting HIV-1 drug resistance to integrase inhibitors" / Gasich E.L., Bunas A.S., Gudel A.S., Belyakova E.S., Bulda K.Yu.; State Institution "Republican Scientific and Practical	Act of implementation of the results of scientific research in the educational process (protocol of the meeting of the department No. 6

Center of Epidemiology and Microbiology"	dated 11.17.2022)
13. The content of the topic «Basics of the infection doctrine. Biological research method» has been updated and the following data have been added: act of implementation of rationalization proposal: "Method for modeling experimental acute respiratory distress syndrome in rats" (No. 4 dated 08.11.2022, adopted by the Belarusian State Medical University / Matlakova, K. I. Pavlov T. G. Metelitsa, E. V. Chegodaeva, A. M. Naborovskaya, L. M. Kundelskaya, G. A. Kurklinskaya, L. V. Butko, Zh.	Act of implementation of the results of scientific research in the educational process (protocol of the meeting of the department No. 6 dated 11.17.2022)
14. The content of the topic « Immunology. The immune system. Innate immunity» has been updated and the following data have been added: act of instructions for use "Method for detecting the 57:01 allele of the locus B of the major human histocompatibility complex (HLAB * 57:01)" / Gasich E.L., Bunas A.S., Gudel A.S., Belyakova E.S. , Bulda K.Yu.; state institution "Republican Scientific and Practical Center of Epidemiology and Microbiology", registration number No. 024-1221 dated 06/10/2022	Act of implementation of the results of scientific research in the educational process (protocol of the meeting of the department No. 6 dated 11.17.2022)

The curriculum is revised and approved at the microbiology, virology, immunology department meeting (protocol № 13 of 08.06.2023 year)

Head of the Microbiology, Virology, Immunology department,
Candidate of Medical Sciences,
PhD, associate professor T.A.Kanashkova

APPROVED
Dean of the Medical Faculty of International Students, PhD, associate professor O.S.Ishutin

Appendix №1

List of practical skills on discipline Microbiology, virology, immunology
for 2023-2024 academic year

1. Prepare fixed smears from the broth culture of bacteria and Gram stain.
2. Prepare fixed smears from agar cultures of bacteria and Gram stain.
3. Determine the morphology of staphylococcus, pure culture, Gram stain.
4. Determine the morphology of streptococcus, a pure culture, Gram stain.
5. Determine the morphology of Neisseria gonorrhoeae in pus from urethra, Gram stain.
6. Determine the morphology of Escherichia coli, pure culture, Gram stain.
7. Determine the morphology of the mixture of Staphylococcus aureus and Escherichia coli, Gram stain.
8. Determine the morphology of Bacillus anthracis, a pure culture, Gram stain.
9. Objectified the morphology of Vibrio cholerae, pure culture, Gram stain.
10. Determine the morphology of Brucella, a pure culture, Gram stain.
11. Determine the morphology of Candida, a pure culture, Gram stain.
12. Determine the morphology of Corynebacterium diphtheria, pure culture, Loeffler stain.
13. Determine the morphology of Klebsiella, a pure culture, negative staining by Hins-Burri.
14. Determine the morphology of mycobacteria in sputum stain Ziehl-Nielsen.
15. Aseptically transfer a bacterial colony from an agar plate to a sterile agar slant
16. Aseptically transfer a bacterial culture from an agar slant to a sterile agar slant
17. Aseptically transfer a bacterial culture from a broth tube to a sterile agar plate
18. Evaluate the results of antibiotic resistance detection by disk-diffusion method.
19. Evaluate the results of the agglutination test in tubes.
20. Evaluate the results of the passive hemagglutination test.
21. Evaluate the results of the hemagglutination inhibition test.
22. Perform the slide agglutination test.
23. Evaluate the biochemical properties of enterobacteria on triple sugar iron agar (Kligler agar).

Appendix 2

List of academic discipline «Microbiology, virology, immunology» literature recommended for 2023-2024 academic year

Basic:

1. Generalov, I. I. Medical Microbiology, Virology & Immunology : lecture course for students of medical universities. Pt. 1 : General Microbiology & Medical Immunology / I. I. Generalov. - Vitebsk : VSMU, 2016. - 281 p.

2. Generalov, I. I. Medical Microbiology, Virology & Immunology : lecture course for students of medical universities. Pt. 2 : Medical Bacteriology & Medical Virology / I. I. Generalov. - Vitebsk : VSMU, 2016. - 390 p.

Additional:

3. Generalov, I. I. Instructions for laboratory training in Special Microbiology and Virology for students of Faculty of Dentistry / I. I. Generalov, A. V. Frolova.– Vitebsk : VSMU, 2016. – 32 p. – Electronic version of publ.

4. Generalov, I. I. Medical Microbiology, Virology & Immunology : lecture course for students of medical universities. Pt. 1 : General Microbiology & Medical Immunology / I. I. Generalov. – Vitebsk : VSMU, 2016. – 281 p. – Electronic version of publ.

5. Zverev, V. V. Medical Microbiology, Virology, Immunology : textbook. Vol. 1 / V. V. Zverev, M. N. Boichenko. - Москва : ГЭОТАР-Медиа, 2020. - 384 p.

6. Zverev, V. V. Medical Microbiology, Virology, Immunology : textbook : Vol. 2. / V. V. Zverev, M. N. Boichenko. - Москва : ГЭОТАР-Медиа, 2020. - 392 p.

7. Слизень, В. В. Общая микробиология = General microbiology : лабораторный практикум / В. В. Слизень [и др.]. – Минск : БГМУ, 2023. – 79 с.

8. *Структура* бактериальной клетки. Бактериоскопический метод исследования = Structure of bacterial cells, Microscopic examination of bacteria : учеб.-метод. пособие / Т.А.Канашкова [и др.] – Минск : БГМУ, 2023. – 24 с.

9. Черношей, Д. А. Иммунология = Immunology : лабораторный практикум / Д. А. Черношей, В. В. Слизень, Т. А. Канашкова. – Минск : БГМУ, 2023. – 64 с.

10. Черношей, Д. А. Лабораторный практикум по вирусологии = Laboratory workbook in virology : лабораторный практикум / Д. А. Черношей [и др.]. –Минск : БГМУ, 2023. – 24 с.

11. Черношей, Д. А. Частная и клиническая микробиология = Special and clinical microbiology : лабораторный практикум / Д. А. Черношей [и др.]. – Минск : БГМУ, 2023. – 55 с.

Заведующий кафедрой
микробиологии, вирусологии, иммунологии _____ Т.А.Канашкова

Согласовано

Заведующий отделом
обслуживания читателей _____ В.А.Коледа