# AMENDMENTS AND CHANGES TO THE CURRICULUM IN THE EDUCAIONAL DISCIPLINE «MICROBIOLOGY, VIROLOGY, IMMUNOLOGY» FOR THE SPECIALTY 1-79 01 01 «GENERAL MEDICINE» 2021-2022 ACADEMIC YEAR

| Amendments and changes | Basis/Reason |
|---|---|
| 1. Changes have been introduced into the educational discipline curricular chart | Educational Plan for 2021/2022 academic year |
| 2. The following sections have been added to the information and methodological part:<br>**MAIN FORMS OF SUPERVISED STUDENT INDEPENDENT WORK:**<br>– preparation and presentation of abstracts;<br>– presentation of reports;<br>– studying topics and problems that have not been discussed at the lectures;<br>– taking notes of original sources (sections of anthologies, collections of documents, monographs, textbooks);<br>– computer testing;<br>– preparation of tests for the organization of mutual assessment;<br>– preparation of didactic materials;<br>– participation in active forms of education;<br>– others.<br>Control of supervised student independent work is carried out in the forms of:<br>– test paper;<br>– final class, colloquium in the form of an oral interview, written work, testing;<br>– discussion of abstracts;<br>– defense of educational assignments;<br>– assessment of an oral reply to a question, presentation, report or problem solving;<br>– checking up abstracts, written reports, accounts, prescriptions;<br>– checking up notes of original sources, monographs and articles;<br>– individual interview;<br>– other tools. | Educational Plan for 2021/2022 academic year |

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| 3. The literature has been updated | |

The curriculum is revised and approved at the microbiology, virology, immunology department meeting (protocol № 14 of 21.06.2020 year)

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APPROVED
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Appendix 1

# METHODICAL MAP OF DISCIPLINE "MICROBIOLOGY, VIROLOGY, IMMUNOLOGY"

| № | The code and the name of the section, topic | Number of class hours | | | | Educative literature | Form of control |
|---|---|---|---|---|---|---|---|
| | | Lectures | Practical classes) | supervised self-study | Independent study | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 9 |
| | **4th semester** | | | | | | |
| 1 | **General microbiology** | **5** | **27** | **3** | **24 (46)[1]** | | |
| 1.1–1.2 | Microbiology as a science. Microbial world. Bacterioscopic method of investigation. Bacterial forms. Methods for investigation of bacterial morphology | 1 | 3 | – | 2 (5)[1] | 1 | Oral questioning , Laboratory report |
| 1.2 | The structure of the bacterial cell | – | 3 | – | 2 (5)[1] | 1 | Oral questioning , Laboratory report, Computer test |
| 1.2 | Morphology of actinomycetes, spirochetes, rickettsia, chlamydia, mycoplasma | – | 3 | – | 2 (5)[1] | 1 | Oral questioning , Laboratory report, Computer test |
| 1.3 | Physiology of microorganisms Antimicrobial measures Bacteriological research method of the 1st and 2rd steps | 1 | 3 | 1 | 3 (5)[1] | 1 | Oral questioning , Laboratory report, Computer test |
| 1.3 | Methods for pure cultures identification | – | 3 | – | 2 (5)[1] | 1 | Oral questioning , Laboratory report, Computer test |
| 1.4 | Genetics of microorganisms | 1 | 3 | – | 3 (5)[1] | 1 | Oral questioning , Laboratory report, Computer test |
| 1.5–1.6 | Ecology of microbes. The microflora of the human body. Infection. Biological research method | 1 | 3 | 1 | 2 (5)[1] | 1 | Oral questioning , Laboratory report, Computer test |
| 1.7 | Microbiological basis of chemotherapy and antiseptics of bacterial infections | 1 | 3 | 1 | 2 (5)[1] | 1 | Oral questioning , Laboratory report, Computer test |
| | Concluding session for: "General Microbiology" | – | 3 | – | 6 | 1 | Concluding test, Control workt, Computer test |
| 2. | **Theoretical and applied immunology** | **7** | **24** | **3** | **20** | | |
| 2.1–2.2 | Immunology. The immune system. Innate immunity | 1 | 3 | 1 | 2(4)[1] | 2 | Oral questioning , Laboratory report, Computer test |
| 2.3 | Immune response. Antigens. B–lymphocytes. Humoral immune response | 2 | 3 | – | 2(4)[1] | 2 | Oral questioning , Laboratory report, Computer test |

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 9 |
|---|---|---|---|---|---|---|---|
| 2.6 | Serological method of research | – | 3 | – | 2(4)[1] | 2 | Oral questioning , Laboratory report, Computer test |
| 2.6 | Enzyme immunoassay | – | 3 | – | 2(4)[1] | 2 | Oral questioning , Laboratory report, Computer test |
| 2.3–2.4 | Cellular immune response. Allergy and ecological immunology. | 2 | 3 | – | 2(4)[1] | 2 | Oral questioning , Laboratory report, Computer test |
| 2.5 2.7 | Antiinfection immunity. Immunoprophylaxis and immunotherapy.. | 2 | 3 | – | 2(5)[1] | 2 | Oral questioning , Laboratory report, Computer test |
| 2.8 | Clinical Immunology | 1 | 3 | 1 | 2(5)[1] | 2 | Oral questioning , Laboratory report, Computer test |
| | Concluding session for the section : "Immunology". | – | 3 | – | 6 | 2 | Concluding test, Control workt, Computer test |
| **3** | **Special medical microbiology** | **9** | **33** | **5** | **60** | | |
| 3.1–3.2 | Gram positive cocci. Neisseria | 2 | 3 | – | 5 | 1 | Oral questioning , Laboratory report, Computer test |
| 3.2–3.3 | Neisseria, Bordetella, Hemophilus, Legionella, Coxiella. | 1 | – | 1 | – | 1 | |
| 3.3 | Enterobacteria. Escherichia. Salmonella. Shigella. | 1 | – | 1 | – | 1 | |
| | | | **5th semester** | | | | |
| 3.3 | Bordetella, Hemophilus, Legionella, Coxiella | – | 3 | – | 5 | 1 | Oral questioning , Laboratory report, Computer test |
| 3.3 | Enterobacteria. Escherichia. Salmonella. Shigella | – | 3 | – | 5 | 1 | Oral questioning , Laboratory report, Computer test |
| 3.3 | Klebsiella. Yersinia. Proteus. Pseudomonas. | – | 3 | – | 5 | 1 | Oral questioning , Laboratory report, Computer test |
| 3.4 | Corynebacterium. Listeria. Actinomycetes. Mycobacteria | 1 | 3 | 1 | 5 | 1 | Oral questioning , Laboratory report, Computer test |
| 3.5 | Vibrio. Pathogens of especially dangerous infections. | – | 3 | 1 | 5 | 1 | Oral questioning , Laboratory report, Computer test |
| 3.6 | Ecological group of anaerobic bacteria | 1 | 3 | – | 5 | 1 | Oral questioning , Laboratory report, Computer test |
| 3.7 | Spirochetes | 1 | 3 | – | 5 | 1 | Oral questioning , Laboratory report, Computer test |
| 3.8 | Rickettsia. Chlamydia. Mycoplasma | 1 | 3 | – | 5 | 1 | Oral questioning , Laboratory report, Computer test |
| 3.9–3.10 | Basics of Medical Mycology and Protozoology | 1 | 3 | 1 | 5 | 1 | Oral questioning , Laboratory report, Computer test |

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 9 |
|---|---|---|---|---|---|---|---|
| | Concluding session for: "Special medical microbiology." | – | 3 | – | 10 | 1 | Concluding test, Control workt, Computer test |
| 4 | **General and special virology** | **7** | **18** | **3** | **40** | | |
| 4.1 | General virology | 1 | 3 | – | 6 | 3 | Oral questioning , Laboratory report, Computer test |
| 4.2 | RNA genomic viruses Orthomyxoviruses. Paramyxoviruses. Coronaviruses. | 2 | 3 | – | 6 | 3 | Oral questioning , Laboratory report, Computer test |
| 4.2 4.6 | Picornaviruses. Retroviruses. Oncogenic viruses | 1 | 3 | 1 | 6 | 3 | Oral questioning , Laboratory report, Computer test |
| 4.3 | Environmental group of arboviruses and roboviruses. Rabdoviruses.. | 1 | 3 | – | 6 | 3 | Oral questioning , Laboratory report, Computer test |
| 4.4 | DNA-Genomic viruses Herpesviruses. Adenoviruses. Papilomaviruses | 1 | 3 | 1 | 6 | 3 | Oral questioning , Laboratory report, Computer test |
| 4.5 4.7 | Hepatitis viruses. Etiology of slow infections. Concluding session for: "General and Special Medical Virology." | 1 | 3 | 1 | 10 | 3 | Oral questioning , Laboratory report, Computer test |
| 5 | **Clinical microbiology** | **1** | **6** | **1** | **10** | | |
| 5.1 | Clinical microbiology. Methods for opportunistic infections diagnostics. | 1 | 6 | – | 5 | 1 | Oral questioning , Laboratory report, Computer test |
| 5.2 | Nosocomial infections. | – | – | 1 | 5 | 1 | Oral questioning , Laboratory report, Computer test |
| | **Intotal hours** | **29** | **108** | **15** | **154** | | **Examination** |

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