Thematic plan of seminar-type classes
in discipline «Immunology»
for students of 2023 year of admission
under the educational programme
31.05.01. General Medicine,
specialisation (profile) General Medicine
(Specialist's degree),
form of study full-time
for the 2025-2026 academic year

№	Thematic blocks	Hours (academic) [3]
1.	[1]Introduction to immunology. [2]The concept of immunity. The subject and tasks of immunology. History of immunology. Types of immunity. The structure of the immune system. Principles of functioning of the immune system.	4
2.	[1]Antigens. [2]Nature, structure, classification, properties. Presentation of exo- and endogenous antigens. Phagocytosis. Methods of studying the phagocytic activity of leukocytes.	4
3.	[1]Humoral immune response. [2]Cellular base. Immunoglobulins: nature, structure, types, functions, production dynamics in primary and secondary immune responses. The complement system and its functions. [2]Methods of studying the complement system. Serological research methods.	4
4.	[1]Cellular immunity. [2]Differentiation of T-lymphocytes. Regulatory functions of T-lymphocytes. The main subpopulations of T-lymphocytes. Recognition of the antigen. Specific and nonspecific cellular cytotoxicity, mechanism, biological significance. Methods of studying cellular immunity and cytotoxicity.	4
5.	[1]Cytokines as factors regulating the immune response. [2]Methods of studying cytokines. Immunological tolerance.	4
6.	Concluding №1[1]	4
7.	[1]Infection and immunity. [2]The immune response in bacterial, viral, fungal infections, helminthic infestations; ways of "escape" of infectious pathogens from immune surveillance.	4
8.	[1]Immunology of the tumor process. [2]Basic immunological mechanisms of antitumor protection. Mechanisms of tumor "escape" from immunological surveillance. Immunological diagnosis of tumors. Approaches to tumor immunotherapy.	4
9.	[1]Immunological monitoring of infectious and non-infectious diseases. [2]Immunoprophylaxis of infectious and non-infectious diseases. Immunobiotechnology.	4
10.	[1]Immunology of reproduction. [2]Immunological factors in the development of infertility. Age-related features of immunity.	4
11.	[1]The basic concepts of autoimmunity. [2]Autoimmune diseases. Classification. Hypotheses of origin. Approaches to diagnosis and treatment. Transplantation immunology.	4

12.	Concluding №2[1]	4
13.	[1]Introduction to clinical immunology. Immunodeficiency states. [2]Principles of immune status assessment. The main types of immunopathology. The concept, classification, marker syndromes of immunodeficiency states. Primary immunodeficiency states, classification, warning signs, principles of diagnosis and treatment.	4
14.	[1]Secondary immunodeficiency states. [2]Immunotropic drugs.	4
15.	[1]Infections of the immune system. [2]The effect of microorganisms on cells and organs of the immune system (HIV, Epstein-Barr virus, cytomegalovirus, HHV-6, HHV-7, etc.). Laboratory diagnostic methods and principles of therapy of infections of the immune system.	4
16.	[1]The concept of allergy. [2]Classification and mechanisms of allergic reactions. Pseudoallergic reactions. Principles of diagnosis and treatment.	4
17.	Concluding №3[1]	2
	Total	66

[1] – topic
[2] – essential content
[3] – one thematic block includes several classes, the duration of one class is 45 minutes, with a break between classes of at least 5 minutes

Considered at the department meeting immunology and allergology, protocol of «29» May 2025 y. № 13.

Head of the Department E.B. Belan