Thematic Plan of Practical Classes
for the discipline "Clinical Immunology and Allergology"
for 5th-year students of the Faculty of International Students
specialty 1-79 01 01 "General Medicine"

No.	Names of Topics, Content of the Practical Class
1.	**Topic 1 Organization of immunological and allergological care. Types of immunopathology. Principles of immunodiagnostics, immunotherapy, and immunoprophylaxis. Immunological deficiency.** *Class Plan:* 1. Organization of the clinical immunology and allergology service. Indications for referral for immunoallergological examination. Duties of a doctor in providing care to patients with immunopathology. 2. Structure and functions of the immune system. Role of innate and adaptive immunity in the development of immunopathology. Types of immunopathology. 3. Immunopathological history. Objective signs and data indicating immunopathology. 4. Immune status, its types, indications for prescription. Interpretation of immunogram results. 5. Primary immunodeficiencies. Clinical forms and manifestations of immunodeficiencies in children and adults. 6. Diagnosis of primary immunodeficiencies in children and adults, treatment methods. 7. Secondary immunodeficiency diseases, causes, classification. 8. Immunocorrection and immunorehabilitation. Indications. Immunomodulatory drugs. Monitoring therapy effectiveness.
2.	**Topic 2 Allergy and pseudoallergy: risk factors, etiopathogenesis, clinical picture. Principles of diagnosis, treatment, and prevention of allergic diseases.** *Class Plan:* 1. Allergy. Epidemiology of allergic diseases. Ecology and allergy. Factors influencing the increase in the prevalence of allergic diseases. Atopy. Hygiene hypothesis. 2. Allergens, classification. Exogenous allergens of non-infectious origin (household, epidermal, food, drug, chemical substances). Exogenous allergens of infectious origin (bacterial, fungal, viral, helminthic), properties. Endogenous allergens (autoallergens). 3. Type I-IV hypersensitivity reactions. Etiopathogenesis. Clinical manifestations. 4. Pseudoallergic reactions, causes and mechanism, clinical significance, specifics of diagnosis and treatment. 5. Diagnosis of allergic diseases. Allergological history. Physical examination. 6. In vivo allergodiagnostics tests. Laboratory methods of allergodiagnostics. Molecular allergodiagnostics. 7. Principles of treatment and emergency care for allergic diseases. Antimediatore, antihistamine, and other drugs. Glucocorticosteroids. Non-specific and allergen-specific immunotherapy.
3.	**Topic 3 Anaphylaxis. Drug hypersensitivity. Food, pollen, and insect allergy.** *Class Plan:* 1. Anaphylaxis, types. Anaphylactic and anaphylactoid shock. Causes of anaphylactic shock, the role of allergens and non-specific agents, pathogenesis, and clinical manifestations. 2. Emergency therapy for Anaphylaxis, patient management tactics after the acute phase is resolved. 3. Food allergy. Types of food intolerance. Food and additives allergens, predisposing factors. 4. Generalized and localized clinical manifestations of food allergy. Differential and specific diagnosis of food allergy (food diary, elimination tests, provocation tests). 5. Treatment of food allergy, elimination diets, non-specific and specific therapy. 6. Insect allergy. Reaction to stings by Hymenoptera insects. Diagnosis of insect allergy, clinical

	manifestations, emergency therapy. Allergic reactions to bites of blood-sucking insects. Treatment and prevention of insect allergy. 7. Types of drug intolerance. Drugs and medications as allergens. Drug hypersensitivity, signs, pathogenesis, diagnosis and differential diagnosis, history, skin tests, provocation tests, laboratory methods, clinical assessment, clinical manifestations (shock, fever, serum sickness-like syndrome, vasculitis). Lesions of the skin and mucous membranes in drug hypersensitivity. Lyell's syndrome, Stevens-Johnson syndrome. Prevention and treatment of drug hypersensitivity.
4.	**Topic 4 Mechanisms of autoimmunization. Immunological markers of autoimmune diseases. Immunological aspects of transplantation.** *Class Plan:* 1. Autoimmune diseases. Classification. Causes and pathogenetic mechanisms of autoimmune diseases. 2. General principles of immunodiagnostics of organ-specific and organ-non-specific autoimmune diseases. Antinuclear antibodies. Immunolaboratory profiles in the diagnosis of autoimmune diseases. Assessment of immune status in autoimmune diseases. 3. Main directions of therapy for autoimmune diseases. 4. Systemic lupus erythematosus. Lupus-like complement-deficient and other syndromes and disease masks, immunodiagnostics, treatment principles, immunological monitoring. 5. Dermatomyositis / polymyositis (primary and secondary), immunopathogenesis, diagnosis, differential diagnosis, treatment. 6. Autoimmune blood diseases (hemolytic anemia, neutropenia, immune thrombocytopenia, lymphopenia, agranulocytosis). 7. Transplantation immunity. Types of transplants. Transplantation of bone marrow, thymus, stem cells, embryonic cells. Principles of donor selection. Tissue typing. 8. Immunological complications. Post-transplant reactions. Immunopathological signs of allograft rejection reaction. "Graft-versus-host" reaction, chimerism.
5.	**Topic 5 Immune mechanisms in the regulation of reproduction and reproductive pathology. Immunological basis of tumor growth.** *Class Plan:* 1. Immune system of reproductive organs and tissues. Immune mechanisms in normal pregnancy. 2. Pregnancy and immune modulations. Immune status of pregnant women. 3. Immunopathology of pregnancy: immune disorders in gestosis, diseases with metabolic disorders, nephropathy, anemia in pregnancy. 4. Immune mechanisms of infertility in women and men. Sperm and spermatozoa antigens, antibodies to them in men and women, causes for formation, methods of detection, significance in infertility. 5. Immunological relationships between the mother and fetus; mechanisms of miscarriage and post-term pregnancy, recurrent miscarriage; antiphospholipid syndrome. 6. Hemolytic disease of the newborn. Maternal isoimmunization with Rh and other erythrocyte antigens. Risk of isoimmunization. 7. Immunological methods for diagnosis and treatment of "mother-fetus" conflicts. 8. Mechanisms of antitumor immunity. Anti-blastoma immune factors. Pro-blastoma factors in tumor formation (suppressing immunity and enhancing tumor growth). Tumor immune resistance. 9. Tumor-associated antigens. Immunodiagnostics of neoplasms. Diagnosis of immunological disorders in patients with oncopathology. 10. Specific and non-specific immunotherapy of tumors.