



## Syllabus Clinical Immunology and Allergology

<b>1. General Information</b>	
<b>Faculty</b>	Medical No 2
<b>Programme</b>	22 Healthcare, 222 General Medicine, the second (master) level of higher education
<b>Subject</b>	“Clinical immunology and Allergology” OK 34 <a href="https://new.meduniv.lviv.ua/kafedry/kafedra-klinichnoyi-imunologiyi-ta-alergologiyi/">https://new.meduniv.lviv.ua/kafedry/kafedra-klinichnoyi- imunologiyi-ta-alergologiyi/</a>
<b>Department</b>	Department of Clinical Immunology and Allergology 70010, Lviv, 69_b Pekarska str., +38 (032) 2756142; <a href="mailto:kaf_immunology@meduniv.lviv.ua">kaf_immunology@meduniv.lviv.ua</a>
<b>Head of Department</b>	prof. Chopyak Valentyna, MD <a href="mailto:chopyakv@ukr.net">chopyakv@ukr.net</a>
<b>Year</b>	V
<b>Semester</b>	IX-X semesters
<b>Type of the Subject</b>	credit
<b>Professors</b>	prof. Chopyak Valentyna, PhD, MD ( <a href="mailto:chopyakv@ukr.net">chopyakv@ukr.net</a> ) prof. Havrylyuk Anna, PhD ( <a href="mailto:ahavrylyuk@meta.ua">ahavrylyuk@meta.ua</a> ) assoc. prof. Lishchuk-Yakymovych Khrystyna, PhD ( <a href="mailto:k_yakymovych@ukr.net">k_yakymovych@ukr.net</a> ) assoc. prof. Zubchenko Svitlana, PhD ( <a href="mailto:svitlana_zu@meta.ua">svitlana_zu@meta.ua</a> ) assist. prof. Horbal Nataliya, PhD ( <a href="mailto:n.horbal@ukr.net">n.horbal@ukr.net</a> ) assist. prof. Tolokh Olga ( <a href="mailto:tos2004@ukr.net">tos2004@ukr.net</a> ) assist. prof. Lomikovska Marta, PhD ( <a href="mailto:ydmarta79@gmail.com">ydmarta79@gmail.com</a> )
<b>Erasmus</b>	No
<b>Responsible Syllabus</b>	assoc. prof. Lishchuk-Yakymovych Khrystyna, PhD ( <a href="mailto:k_yakymovych@ukr.net">k_yakymovych@ukr.net</a> )
<b>Credits ECTS</b>	1,5
<b>Hours</b>	Total — 45 h; Lectures – 6; Practical classes – 28 h; Individual work – 11 h.
<b>Language of Instruction</b>	English
<b>Consultations</b>	According to the schedule
<b>Clinical Base</b>	Department of Clinical Immunology and Allergology, 70010, Lviv, 69_b Pekarska str., +38 (032) 275 61 42; Public Non-Commercial Enterprise of the Lviv Regional Council “Lviv Regional Clinical Diagnostic Center”; working hours: Monday – Friday 8:00 - 20:00.

### 2. Brief review of the subject

According to the Order of Danylo Halytsky Lviv National Medical University № 129-3 dated 13 Jan 2020 “Implementation of the curriculum for training specialists of the II (Master’s) level of field of knowledge 22 Health care, 222 General Medicine, the second (Master’s) level of higher education, V year of study”, educational discipline “Clinical Immunology and Allergology” is recommended for study at the second (Master’s) level of higher education, field of knowledge 22 "Health care" specialty “222 “Medicine”.

Discipline “Clinical Immunology and Allergology” is aimed at training specialists, who possess deep theoretical and practical knowledge, competencies and skills, high professional qualification.

The syllabus includes learning composition and functions of the immune system, mucous membranes, immune diseases, allergic diseases, their diagnostics, treatment and prophylaxis, as well as COVID-19 and vaccination. The discipline provides fundamentals of healthy lifestyle, as well as nonspecific and specific prevention.

### 3. Aim of the Subject

1. The studying purpose of the discipline "Clinical Immunology and Allergology" is the formation of systemic medical knowledge, skills for diagnosis of immune and allergic diseases. It is anticipated that knowledge of the basic clinical signs of immune and allergic diseases will enable the general practitioner to diagnose such diseases in time and direct the patient to a clinical immunologist or allergist. Awareness of the manifestations of sexually/blood transmitted diseases (HIV infection, hepatitis B and C, papillomavirus and herpetic (HSV 1/2, EBV, CMV, HHV6 infections, etc.) is an important part of the professional training of a general practitioner, and knowledge of preventive measures against these diseases is the responsibility of the physician of any specialty.

2. The main tasks of the discipline "Clinical Immunology and Allergology" is the study of:

- the basics of clinical immunology (cells and organs of immune system, anatomical and microscopic structure of mucous membranes, physiology and pathology of the skin, the basis of clinical pharmacology for the treatment of immunological and allergic diseases);

- main clinical and diagnostic signs of widespread immunological and allergic diseases, their prevention and treatment;

- features of the clinical course of some infections (including papillomavirus and herpetic (HSV 1/2, EBV, CMV, HHV6 infections, etc.), HIV-infections and COVID-19.

- Acquisition by the student of knowledge and professional skills of the differential diagnosis of the most common diseases based on immunopathological syndromes, dispensary monitoring of patients with primary and secondary immunodeficiencies in an outpatient setting and emergency care for the most common acute allergic conditions based on approved protocols.

- Formation of the ability to use knowledge, skills, abilities and understanding to solve typical problems in doctor daily activity in the field of health care, which scope is provided by certain lists of syndromes and symptoms of diseases, emergencies, physiological conditions.

#### **The ultimate goals of the discipline**

The ultimate goals of the discipline "Clinical Immunology and Allergology" are based on the educational goals defined in the educational-professional program (OPP). They are defined as follows:

1. To determine the etiological and pathogenetic factors of the most common immune-dependent diseases in adults and children.

2. To classify and to analyze their typical clinical picture

3. To make a diagnostic plan and to analyze the laboratory findings and instrumental examinations of immunocompromised individuals, as well as to demonstrate the ability of the treatment, rehabilitation and prevention of the most common immune-dependent diseases.

4. To diagnose and to provide emergency care in acute allergic conditions.

5. To demonstrate mastery of deontological principles of a medical specialist and the principles of professional subordination in the medicine.

3. **Competence and learning outcomes**, to the formation of which the discipline

contributes (the relationship with the normative content of the training of higher education graduates, formulated in terms of results of study in the Standard of Higher Education).

In accordance with the requirements of the Standard of Higher Education, discipline ensures students' acquisition of **competences**:

**- integral:**

The discipline provides ability to apply acquired general and special competencies for solving complex tasks of professional activity and practical problems in health care in a certain position, application of which is determined by a list of syndromes and symptoms of diseases, emergencies, physiological conditions and diseases, which require special tactics of patient management; laboratory and instrumental investigations, medical manipulations; issues of occupational, forensic and military expertise and/or implementation of innovations.

**-general (GC):**

GC 1. The ability to abstract thinking and analysis;

GC 2. The ability to learn and possess modern information and communication technologies.

GC 3. Ability to apply knowledge in practical situations.

GC 4. Knowledge and understanding of the subject area and understanding of the professional activities.

GC 5. Ability to adapt and act in a new situation.

GC 6. Ability to take a reasonable decisions

GC 7. Ability to work in a team.

GC 8. Interpersonal skills.

GC 9. Ability to communicate in the state language both orally and in writing.

GC 11. Skills in the use of information and communication technologies.

GC 12. Definiteness and perseverance in terms of tasks and responsibilities.

GC 13. The ability to act socially responsibly and consciously.

GC 14. The desire to save environment.

GC 15. Ability to act in accordance with ethical regulations.

**- special (professional, substantive) (SC):**

- SC 1. Patient interviewing skills, skills of examination of the patient.
- SC 2. Ability to determine the required list of laboratory and instrumental research and evaluation of their results.
- SC 3. Ability to establish a preliminary and clinical diagnosis of the disease.
- SC 4. Ability to determine the required mode of work and rest during treatment diseases.
- SC 5. Ability to determine the principles of nutrition in treatment diseases.
- SC 6. Ability to determine the principles and nature of treatment of diseases.
- SC 7. Ability to diagnose emergencies.
- SC 8. Ability to determine the tactics of emergency medical care.
- SC 9. Skills in providing emergency medical care.
- SC 11. Skills of medical manipulations.
- SC 13. Ability to conduct sanitary and preventive measures.
- SC 14. Ability to plan and carry out preventive and anti-epidemic measures against infectious diseases.
- SC 15. Ability to determine the persons subject to dispensary supervision tactics.
- SC 16. Ability to conduct an efficiency examination.
- SC 17. Ability to keep medical records.
- SC 20. Ability to assess the impact of the environment, socio-economic and biological determinants on the health of the individual, family, population.

#### **4. Preliminary requirements**

**the discipline "Clinical Immunology and Allergology":**

- is based on the knowledge, previously acquired by masters, in anatomy, histology, normal and pathological physiology, medical biology, microbiology and other morphological disciplines and it is integrated with these disciplines;

- is an important component of further master study of clinical disciplines providing integration of teaching with the above disciplines and forming abilities to apply dermatology knowledge in further education and in professional activities;

- is associated with other medical specialties: with infectology (STI, transmissible viral and parasitic diseases of the skin and skin appendages), toxicology (toxicodermia, pseudoporphyria and other toxic reactions), hematology (skin manifestations of polycythemia), rheumatology (systemic collagenosis, vasculitis), endocrinology (skin changes in diabetes mellitus, hypothyroidism, hyperthyroidism), oncology (melanomas and other tumors of the skin and its appendages), with neurology (neurodermatitis, genetically caused neuro-skin syndromes), allergology (Lyell's syndrome, Stevens-Johnson syndrome, urticaria, angioneurotic edema and other allergic reactions to drugs), dental disciplines (cheilitis, precancerous and cancer oral mucous membranes), psychiatry (trychotilomania, pathomimia).

**Co-requisites:**

1. therapy,
2. internal medicine
3. infectious diseases
4. pediatrics
5. dermatology
6. surgery
7. obstetrics and gynecology

**Postrequisites:**

1. therapy,
2. internal medicine
3. infectious diseases
4. pediatrics
5. dermatology
6. surgery
7. obstetrics and gynecology

**5. Programme Results (PR) of the Course**

PR1. To collect data on the patient's complaints, history of disease, history of life (of the patient or his relatives, guardians, etc.), to assess the general condition of the patient, to provide the physical examination.

PR2. To evaluate information about the diagnosis in the hospital, using a standard procedure, using the analysis of the results of objective examination of the patient and based on the results of laboratory and instrumental studies.

PR3. To be able to identify and record the leading clinical symptom or syndrome. Встановлювати найбільш вірогідний або синдромний діагноз захворювання. Assign laboratory and / or instrumental examinations, consultations of narrow specialists to confirm the clinical diagnosis. To perform differential diagnosis. To be able to establish a preliminary and clinical diagnosis of the disease.

PR4. To determine the necessary mode of work and rest in the treatment of the disease.

PR5. To determine the necessary medical nutrition in the treatment of the disease.

PR6. To identify principles of treatment (conservative, surgical).

PR7. To determine the tactics of providing emergency medical care under any circumstances.

PR8. To provide emergency medical care.

PR11. To perform medical manipulations.

PR12. To form dispensary groups of patients; groups of healthy patients that are subjected to dispensary monitoring among listed population. To perform a system of anti-epidemic and prophylactic measures of primary medical and sanitary aid to the population. To perform a system of measures of primary prophylaxis within medical and sanitary aid to the population. To organize conduction of measures of secondary and tertiary prophylaxis among listed population.

PR13. Planning measures to prevent the spread of infectious diseases. Carrying out detection and early diagnosis of infectious diseases; primary anti-epidemic measures in the center of an infectious disease. Identifying risk groups, risk areas, time of risk, risk factors and carry out epidemiological analysis of infectious diseases of the population.

PR14. To determine tactics of examination and secondary prophylaxis of patients that are subjected to dispensary monitoring; tactics of examination and primary prophylaxis of healthy individuals that are subjected to dispensary monitoring; to calculate and administer necessary nutrition products to infants.

PR15. To determine presence and degree of restrictions of life activity, type, degree and duration of disability with arrangement of appropriate documents.

PR16. Preparing an annual report on personal production activities; keeping medical records of the patient and the population.

PR17. To conduct screening for detection of the most common infectious diseases; to assess morbidity rates, integral values of health; to reveal risk factors of occurrence and onset of diseases; to form risk groups among the population. To determine a source and/or site of relevant information depending on its type; to receive necessary information from a determined source; to process and analyze obtained information.

PR18. To determine negative environmental factors; to analyze health condition among certain population; to determine the presence of a connection between environmental condition and health condition among certain population. To analyze morbidity rate among the population, detecting risk groups, risk territories, risk time, risk factors. To assess influence of social, economic and biological determinants on health of an individual, family and population.

PR21. Forming goals and determining the structure of personal activities.

PR22. Adhering to a healthy lifestyle, using of the techniques of self-regulation and self-control.

PR23. Being aware of and guided in their activities by civil rights, freedoms and responsibilities, raising the general educational and cultural level.

PR24. Adhering to the requirements of ethics, bioethics and deontology in their professional activities.

PR25. Organizing the necessary level of individual safety (own and persons cared for) in case of typical dangerous situations in the individual professional field.

#### **List of Programme Results**

<p>The code is created when filling in the syllabus (category: Kn - knowledge, Ab - ability, C - competence, AR - autonomy and responsibility)</p>	<p>Programme Results determine that the student must know, understand and be able to perform, after completing the discipline. Programme Results follow from the set learning goals. To enroll in the discipline, it is necessary to confirm the achievement of each learning outcome.</p>	<p>Matrix of the Program Results (PR) Code in the Higher Education Standard</p>
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Kn -1	To know the current law rules and regulations of the relationship doctor – clinical immunologist/allergist - patient.	<i>PR1,2,19,20</i>
Kn -2	To know methods of examination of immunological/allergic patients; stages of diagnostic process.	<i>PR1,2,19,20</i>
Kn -3	To know age-related peculiarities of the immune system and mucosa composition in adulthood and childhood, to learn immune system embryogenesis, anatomic and physiological peculiarities of the cells and organs of immune system in different age groups, risk factors, which affect the development of immune response diseases.	<i>PR1, PR2, PR3</i>
Kn -4	To know theoretical fundamentals of immunological signs in immune system damage.	<i>PR1, PR3</i>
Kn -5	To know special immunological and allergic methods of examining patients (palpation, dermatography, skin allergy tests); laboratory methods of diagnostics (general and special).	<i>PR1, PR2, PR3, PR13</i>
Kn -5	To know basic principles and methods of treating patients with immunological and allergic pathologies, criteria of cure, required set of recommendations, types and degrees of disability of patients with immunological and allergic diseases.	<i>PR4, PR5, PR6, PR15</i>
Kn -6	To know basic methods of topical therapy in clinical immunology and allergy; treatment of allergic dermatosis in adults and children by means of health resort treatment and physiotherapeutic (d'Arsonvalization, phototherapy, ultrasound therapy, cryotherapy) methods.	<i>PR4, PR5, PR6</i>
Kn -7	To know basic signs, diagnostic methods and action algorithms in emergency conditions in dermatovenereology practice.	<i>PR7, PR8</i>
Kn -8	To know fundamentals of preventing skin (including contagious) and venereal diseases; groups of patients with skin and venereal diseases, who should be monitored in dispensaries.	<i>PR12, PR13, PR18</i>
Kn -9	To know methods and technique of diagnostic and therapeutic manipulations, which can be used in a dermatologist's practice.	<i>PR11</i>
Kn -10	To know structure of dermatovenereology service. To assess level of hazard while performing professional tasks. To know necessary knowledge in the field of information technologies, used in professional activity in the	<i>PR16, PR17</i>



	Ukrainian and foreign languages.	
Kn -11	To know methods of applying knowledge in detecting, setting and solving problems of professional activity.	<i>PR21</i>
Kn -12	To know moral and ethical principles of a medical specialist and rules of professional subordination.	<i>PR24</i>
Kn -13	To be able to assess level of hazard in performing professional tasks.	<i>PR25</i>
Kn -14	To be able to adjust and act in a new situation.  To be able to work independently, demonstrate skills, set and solve problems based on civil rights, duties and continuing improvement of a professional level.	<i>PR22, PR23</i>
Ab -1	To be able to record and interpret complaints, anamnesis of diseases and life, to conduct physical examination (using dermatological tests) of respective patients.	<i>PR1</i>
Ab -2	To know a technique of conducting diagnostic tests (examination of patients with Wood's lamp, conduction of Baltzer probe, determination of psoriatic phenomena etc.), collection of material for further laboratory study; to assess and interpret the obtained results.	<i>PR2, PR3</i>
Ab -3	To be able to apply topical remedies (poultices, pastes, ointments etc.). Technique of UV radiation of the skin in psoriasis and other dermatoses.	<i>PR4, PR5, PR6</i>
Ab -4	To be able to provide first aid in emergencies, which can occur in a dermatovenereologist's practice.	<i>PR7, PR8</i>
Ab -5	To know methods and technique of conducting diagnostic and therapeutic manipulations, which can be used in a dermatovenereologist's practice.	<i>PR11</i>
Ab -6	To know how to perform early diagnostics of skin and venereal diseases, be able to plan and implement measures to prevent the spread of these diseases.	<i>PR12, PR13, PR14, PR17</i>
Ab -7	To know how to record documents necessary for a dermatovenereologist's practice (case history, patient's medical chart, medical disability certificate, reports etc.).	<i>PR15, PR16</i>
Ab -8	To have necessary knowledge of information technologies, used in professional practice in the Ukrainian and foreign languages.	<i>PR17</i>
Ab -9	To be able to perform professional practice following safety rules.	<i>PR25, PR22</i>
Ab -10	To be able to apply knowledge in detecting, setting and solving problems of professional	<i>PR21, PR23</i>

	activity.	
Ab -11	To follow moral and ethical principles of a young specialist in medical practice and rules of professional subordination.	PR24
Ab -12	To be able to conduct analysis of professional information, make sensible decisions, acquire contemporary knowledge.	PR21, PR2, PR24
Ab -13	To be able to perform professional practice, which requires innovations and integration of knowledge.	PR21, PR23, PR24
Ab -14	To follow moral and ethical principles of a medical specialist and rules of professional subordination in practical activity.	PR21, PR23, PR24
C-1	Ability of abstract reasoning and analysis; ability of studying and understanding new information and communication technologies.	PR23, PR16
C-2	Ability of search, elaboration and analysis of information from different sources in the Ukrainian and foreign languages.	PR17, PR16
C-3	Ability of acting according to ethical rules, working in a team with colleagues and patients.	PR24
C-4	Skills of performing safe activity, ability of assessing and providing quality of conducted work.	PR25
C-5	To determine etiological and pathogenic factors of appearance and further clinical course of the most common human skin and venereal diseases.	PR1, PR2, PR3
C-6	To describe dermatological conditions and refer a patient with signs of skin and venereal diseases to a specialist.	PR1, PR2, PR3
C-7	To prescribe laboratory and/or instrumental examination, perform differential diagnostics of dermatoses.	PR1, PR2
C-8	To determine basic principles of treating patients according to their diagnosis.	PR4, PR5, PR6
C-9	To determine tactics of management of patients with skin and venereal diseases.	PR4, PR5, PR6
C-10	To administer proper topical and systemic therapy.	PR4, PR5, PR6
C - 11	Organization of work on prophylaxis of skin and venereal diseases in different dispensary groups.	PR12, PR13, PR14, PR17, PR18
C - 12	To establish proper relationships to achieve goals.	PR1, PR2, PR3, PR4, PR5, PR6
C - 13	To form communication strategy in professional activity.	PR24, PR23,
C - 14	To establish relationships with subjects of practical activity.	PR23

AR -1	To take responsibility for following valid legal standards of relationships doctor-dermatovenereologist → patient.	<i>PR1, PR24, PR23</i>
AR -1	To take responsibility for accuracy of anamnesis record, conduction of examination and detection of the main risk factors for development of skin and venereal diseases.	<i>PR1, PR2, PR3, PR17, PR18</i>
AR -2	To be responsible for accuracy of performing stages of examination of a dermatological patient and conduction of additional examination methods.	<i>PR2, PR3</i>
AR -3	To be responsible for having knowledge at an adequate level concerning basic principles and methods of treating patients with skin and venereal diseases. To have knowledge of classification of dermatological and functional equipment.	<i>PR4, PR5, PR6, PR7, PR8</i>
AR -4	To be responsible for having knowledge at an adequate level concerning basic principles and methods of prophylaxis and prevention of spread of skin and venereal diseases.	<i>PR12, PR13, PR14, PR17</i>
AR -5	To be responsible for timely acquiring of knowledge.	<i>PR1, PR23, PR24</i>
AR -6	To be responsible for continuing development with high level of autonomy.	<i>PR1, PR23</i>
AR -7	To be responsible for substantiation of decisions.	<i>PR13, PR14,</i>
AR -8	To be responsible for quality of professional tasks performed in a new situation.	<i>PR1, PR2, PR3, PR4, PR5, PR6, PR7, PR8</i>
AR -9	To be responsible for following moral and ethical principles of a medical specialist and rules of professional subordination.	<i>PR1, PR2, PR24</i>

#### **6. Form and scope of the course**

Course format (full-time or part-time)	Full-time	
Type of classes	Q-ty of hours	Number of groups
Lectures (L)	6	According to the Schedule
Practical classes (P)	28	
Self educational work (SW)	11	

#### **7. Topics and content of the course**

Class type and code	Topic	Class content	Educational result code	Professor
L - 1	Introduction to dermatovenereology. General issues of aetiology and pathogenesis of skin and oral cavity mucous membranes diseases. Dermatological ABC.	Short historical essays of the history of Dermatovenereology development. Ukrainian and world Dermatology school. Lviv Dermatological School. The anatomy, histological structure of skin, its	<i>PR1, PR2, PR3, PR4, PR5, PR6, PR12, PR15, PR18, PR21, PR22, PR23,</i>	According to the Schedule

	Psoriatic disease.	<p>appendages and oral mucosa The nature of functional properties of skin, their age and sex characteristics.</p> <p>Fundamentals of skin diseases diagnosis. Modern views on etiology and pathogenesis of psoriasis, clinical manifestation, evolution of rash, the stages of clinical course, diagnostic phenomena of psoriasis, features of differential diagnostics of psoriasis, treatment algorithm and indications concerning medical-labour expert commission.</p>	<i>PR24</i>	
L - 2	Vesicular and viral diseases of skin and mucous membranes.	<p>Classification of bullous dermatoses. pemphigus vera, Duhring disease, viral diseases: modern conception of etiopathogenesis, pathomorphological changes of skin, clinical forms, diagnostics, treatment.</p>	<i>PR1, PR2, PR3, PR4, PR5, PR6, PR7, PR8, PR12, PR13, PR14, PR15, PR21, PR22, PR23, PR24</i>	According to the Schedule
L - 3	WHO classification of sexually transmitted infectious diseases. General course of syphilis. Classification of syphilis. General characteristics of various syphilis periods. Principles of treatment and prevention of sexually transmitted diseases.	<p>Classification of diseases, predominantly transmitted sexually. History of the emergence and further development of syphilis in Europe. Features of STD epidemiology. Ways of transmission and conditions of infections, peculiarities of immunity, reinfection, superinfecting with syphilis, general course of syphilis, characteristics and variety of clinical manifestations, General principles of therapy. Clinical and serological monitoring. Basic principles of prevention.</p>	<i>PR1, PR2, PR3, PR4, PR5, PR6, PR12, PR13, PR14, PR18, PR25, PR21, PR22, PR23, PR24</i>	According to the Schedule
P-1	<p><b>Propedeutics of dermatovenereology.</b></p> <p><b>Papular diseases:</b></p> <p>Anatomy, histology and physiology of human skin. Elements of skin rashes and methods of check-up and examination of patients with skin pathology. Psoriasis. Lichen planus.</p>	<p>Stages of formation of dermatovenereology as a separate clinical discipline. The anatomy of skin, its appendages and oral mucosa; Histological structure of skin, its appendages and oral mucosa; nature of functional properties of skin, its age and sex characteristics;</p>	<i>PR1, PR2, PR3, PR4, PR5, PR6, PR11, PR12, PR15, PR17, PR18, PR21, PR22, PR23, PR24</i>	According to the Schedule

	<p>Diagnostics, differential diagnostics, clinical course, and treatment.</p>	<p>Histopathological changes in the skin and its appendages and oral mucosa of mouth in health or in various pathological conditions. Fundamentals of skin diseases diagnosis. Psoriasis and lichen planus: etiology and pathogenesis, clinical manifestation, evolution of rash, the stages of clinical course, diagnostic tests, differential diagnostics, treatment algorithm and indications concerning medical-labour expert commission. Additional methods of examination: diascopy, skin scraping, determination of dermographism, skin allergotests, luminescent diagnostics, biopsy, diagnostic tests and phenomena.</p>		
<p>P-2</p>	<p><b>Parasitic and infectious skin diseases:</b>  Pyodermas. Parasitic skin diseases, scabies, pediculosis, demodicosis. The principle of their differentiation, prevention and treatment.</p>	<p>Diseases caused by human and animal parasites. Groups of ectoparasite infections: diseases caused by the penetration of the parasites into the skin (scabies, demodicosis), and diseases caused by parasites bites (lice infestation) and insect stings, the ways and possible conditions of ectoparasites infection of the patients, clinical forms of scabies and peculiarities of disease course; diagnostic criteria of skin manifestation during scabies and its complications; acarophobia and its manifestations which may arise due to post-scabies itch development; methods and principles of treatment, prophylaxis and clinical examination of scabies patients. Classification and general characteristics of pyogenic lesions of skin and mucous membranes. Modern views on ethiology</p>	<p><i>PR1, PR2, PR3, PR4, PR5, PR6, PR11, PR12, PR13, PR14, PR15, PR21, PR22, PR23, PR24</i></p>	<p>According to the Schedule</p>

		and pathogenesis of different clinical types of pyoderma; the main clinical types of pyoderma, the general and topical treatment of pyoderma, preventive measures of impetiginous lesions of the skin and its appendages.		
P-3	<p><b>Mycotic skin diseases:</b> Keratomycoses and feet mycoses. Trichomycoses: microsporia, trichophytosis, scab. Candidiasis. Clinical manifestations, laboratory diagnostics, therapy and prevention. Curation No.1.</p>	Epidemiology and pathogenesis of mycotic lesions of skin and mucous membranes. Clinical features of mycotic lesions of skin and mucous membranes. The principles of diagnostics, therapy and prophylaxis of mycotic lesions of skin and mucous membranes.	<i>PR1, PR2, PR3, PR4, PR5, PR6, PR11, PR13, PR14, PR15, PR16, PR21, PR22, PR23, PR24</i>	According to the Schedule
P-4	<p><b>Allergodermatoses and bullous-vesicular skin diseases:</b> Allergodermatoses. Clinics and treatment. Practical skills in writing medical history of a dermatological patient. Bullous dermatoses. Viral dermatoses. Skin signs of COVID – 19. Curation No.2.</p>	The modern concept of the allergodermatoses' etiopathogenesis. The ways and likely conditions of the organism sensitization. The factors affecting the course of allergodermatoses. Characteristics of the allergodermatoses' clinical course. The general principles of differential diagnosis of allergodermatoses. Treatment strategy of patients with allergic skin diseases. Classification and common characteristics of different forms of pemphigus vera and Duhring disease. Clinical course and clinical findings of pemphigus vera and Duhring disease. Clinical findings of typical appearances of pemphigus vera and Duhring disease. The main principles of therapy for pemphigus vera and Duhring disease. Viral infections of skin and mucous membranes: viral infections whose main symptom is blistering (herpes simplex and herpes zoster); viral infections whose main symptom is verruca (verruca vulgaris, flat wart, condyloma acuminatum, molluscum contagiosum). The current views on etiology, prevalence, pathogenesis, and the course of viral infections of skin and mucous membranes, the role of sexually	<i>PR1, PR2, PR3, PR4, PR5, PR6, PR7, PR8, PR11, PR12, PR13, PR14, PR15, PR16, PR17, PR18, PR21, PR22, PR23, PR24</i>	According to the Schedule

		transmitted viral infections, treatment principles.		
P-5	<p><b>Modern epidemiology and classification of STI. Causative agents, pathogenesis and general course of syphilis:</b></p> <p>Clinical and serological specific features of primary syphilis. Immunity. Reinfection. Superinfection. Serodiagnosis. Secondary period of syphilis and its differentiation. Tertiary and congenital syphilis. Diagnostics, clinical features and treatment principles.</p>	<p>WHO classification of sexually transmitted infectious diseases. Features of STD epidemiology. Ways of transmission and conditions of infections, peculiarities of immunity, reinfection, superinfecting with syphilis, general course of syphilis, characteristics and variety of clinical manifestations, factors affecting the duration and peculiarities of the incubation period of syphilis. General principles of therapy. Clinical and serological monitoring. Basic principles of prevention. Deontology in collecting of general and sexual medical history of the patient.</p>	<p><i>PR1, PR2, PR3, PR4, PR5, PR6, PR11, PR13, PR14, PR15, PR18, PR21, PR22, PR23, PR24, PR25</i></p>	According to the Schedule
P-6	<p><b>Gonorrhoea and non-gonorrhoea urethritis. Dermatological aspects of HIV infection:</b></p> <p>Specific features of dysfunction of urinary tract caused by gonococcus, trichomonas, chlamydia. Principles of treatment and prevention. HIV-AIDS in Ukraine. Main types of their clinical course. Dermatological aspects of this problem. Basic organizational and legal frameworks to control its further spreading. Principles of treatment and prevention.</p>	<p>Gonorrhoea: the causative agent of gonorrhoea, pathogenesis, epidemiology, classification, clinical manifestations of gonorrhoea in men. Clinical manifestations of gonorrhoea in women. Complications of gonococcal infection. Clinical and laboratory diagnostics. Treatment, prevention. The objective data of the clinical picture of HIV infection and to generalize their results. The ability to determine AIDS-defining diseases. The dermatological manifestations of AIDS. The clinical classification, general course and diagnosis of HIV infection in an individual patient, the appropriate laboratory methods to confirm the diagnosis of HIV infection. The structure and life cycle of HIV, immunopathogenesis and epidemiology of HIV infection; High risk groups of HIV infection; Methods of laboratory diagnostics of HIV infection; Methods of laboratory diagnostics of HIV infection in children; Methods of laboratory diagnostics of AIDS-defining diseases; Methods of laboratory diagnostics of</p>	<p><i>PR1, PR2, PR3, PR4, PR5, PR6, PR11, PR13, PR14, PR15, PR18, PR21, PR22, PR23, PR24, PR25</i></p>	According to the Schedule

		immune system disorders; The principles of treatment of HIV patients; Prophylactic HIV infection measures.		
P-7	<b>Defence of the educational medical history of a dermatological patients. Practical skills. Differential credit:</b> Practical skills in writing medical history of a dermatological patient. Protection of medical history. Practical skills in dermatovenereology.	The scheme of educational medical history with making and substantiation of final dermatological diagnosis and concomitant diagnoses in case of the presence of combined pathology in a patient; basic practical skills in dermatovenereology: technique of physical examination of a patient; investigation of squamas, hair and nails for pathological fungi; examination of a patient under a Wood's lamp; Baltser's test; psoriatic phenomena; technique of identification of treponema pallidum and gonococcus; three-glass test; Nikolsky's symptom; Pospelov's symptom; writing out of basic dermatological prescriptions.	<i>PR1, PR2, PR3, PR4, PR5, PR6, PR12, PR13, PR14, PR15, PR16, PR21, PR22, PR23, PR24</i>	According to the Schedule
SW -1	History of dermatology and venereology development. National school of dermatologists. Lviv dermatological school.	Stages of formation of dermatovenereology as a separate clinical discipline. Prominent figures of the dermatology.	<i>PR21, PR23</i>	According to the Schedule
SW -2	Main methods of treatment used in dermatology. Formulations for topical administration, indications and contraindications to their use.	Modern methods of therapy in dermatology. Topical therapy: basic principles, rules, indications and contraindications. Dosage forms for topical use (creams, ointments, gels, lotions, etc.).	<i>PR4, PR5, PR6</i>	According to the Schedule
SW -3	Allergodermatoses (dermatitis, toxicodermatosis, eczema, atopic dermatitis).	Allergodermatoses (dermatitis, toxicoderma, eczema, atopic dermatitis): modern views on etiopathogenesis, management of patients, guidelines.	<i>PR1, PR3, PR4, PR5, PR6, PR7, PR8, PR12, PR13, PR14, PR15, PR17, PR18, PR21, PR22, PR23, PR24</i>	According to the Schedule
SW -4	Pyoderma. Principles of treatment and prevention of infectious skin diseases.	Pyoderma (staphylococcus, streptococcus, mixed).	<i>PR1, PR3, PR4, PR5, PR6, PR12, PR13, PR14,</i>	According to the Schedule



		principles of their differentiation, modern views on etiopathogenesis, management of patients, protocols, prevention.	<i>PR15, PR18, PR21, PR22, PR23, PR24</i>	
SW -5	Parasitic skin diseases. Principles of treatment and prevention.	Modern views on the principles of therapy and prevention of parasitic skin diseases, domestic and international patient management protocols.	<i>PR1, PR3, PR4, PR5, PR6, PR13, PR14, PR18, PR21, PR22, PR23, PR24</i>	According to the Schedule
SW -6	The main manifestations of specific features and diagnostics of glabrous skin mycotic damage.	Clinical, instrumental, laboratory methods of early diagnosis of mycoses.	<i>PR1, PR3, PR4, PR5, PR6, PR13, PR14, PR15, PR18,</i>	According to the Schedule
SW -7	Bullous dermatoses: etiopathogenesis, clinical manifestations and course. Specific features of diagnostics and treatment.	Modern views on the etiopathogenesis, clinical manifestations and course, features of diagnosis and treatment of bullous dermatoses. Paraneoplastic bullous dermatoses.	<i>PR1, PR3, PR4, PR5, PR6, PR12, PR13, PR14, PR15, PR17, PR21, PR22, PR23, PR24</i>	According to the Schedule
SW -8	Viral dermatoses: etiopathogenesis, clinical manifestations and course. Specific features of diagnostics and treatment.	Modern views on the etiopathogenesis, clinical manifestations and course, features of diagnosis, treatment and prevention of viral diseases of the skin and mucous membranes.	<i>PR1, PR3, PR4, PR5, PR6, PR13, PR14, PR15, PR21, PR22, PR23, PR24</i>	According to the Schedule
SW -9	Serological tests in syphilis diagnostics. False positive serological tests. Errors in syphilis diagnostics.	Serodiagnosis to confirm the clinical diagnosis of syphilis, diagnosis of latent syphilis, monitoring the effectiveness of treatment, as one of the criteria for the cure of patients with syphilis, for the prevention of syphilis in certain groups. Sensitivity, specificity of tests. Interpretation of results. Errors in the diagnosis of syphilis.	<i>PR2, PR13, PR14, PR25</i>	According to the Schedule
SW -10	Modern specific features of gonococcal infection. The principles of diagnosis, treatment and prevention.	Current aspects of diagnosis, therapy and prevention of gonorrhoea, the problem of antibiotic resistance.	<i>PR1, PR3, PR4, PR5, PR6, PR13, PR14, PR15, PR21, PR22, PR23, PR24</i>	According to the Schedule
SW -11	Opportunistic infections and skin stigma at AIDS, their clinical characteristics.	Features of the course, clinic, diagnosis of opportunistic infections (bacterial, viral, fungal) and skin stigmas of AIDS, their clinical characteristics.	<i>PR1, PR3, PR4, PR5, PR6, PR13, PR14, PR15, PR21, PR22, PR23, PR24,</i>	According to the Schedule

			<i>PR25</i>	
SW -12	Providing dermatovenereological care at the primary level of medical care in emergency situations.	Features of providing dermatovenereological care in case of emergencies.	<i>PR3, PR4, PR5, PR6, PR7, PR8, PR21, PR22, PR23, PR24, PR25</i>	According to the Schedule
<p>Traditional teaching methods are used in studying the discipline “Clinical Immunology and Allergology”: verbal, visual, practical; as well as methods of educational and cognitive activity: explanatory and illustrative, reproductive, problematic methods, partially exploratory, research method. The methods of control, which are teaching methods, include lecturer’s control, self-control, mutual control, self-correction and mutual correction.</p> <p>Multimedia and tables available at the department are used during lectures to transfer and help acquire necessary knowledge.</p> <p>Textbooks, methodological guides for Masters, methodical materials on the class theme, handouts, moulages, microsections, demonstration of slides, and certain means of instrumental diagnostics for development of practical skills, situational tasks are used during practical classes to transfer and help acquire necessary knowledge. Interactive technologies are used during every class: educational films, photo tasks, quizzes on each theme etc.</p> <p>Masters’ individual work includes preparation for practical classes and learning of certain themes, which constitute a part of practical classes or are referred to self-study section. Therefore, educational textbooks, methodological guides etc. have been compiled.</p> <p>All necessary materials (theses and presentations of lectures, methodological guides, and standardized documents) are presented on an information platform of Danylo Halytsky Lviv National Medical University – MISA.</p>				
<b>8. Verification of results</b>				
<b>Continuous control</b>				
<p>Continuous control is carried out during each practical according to the specific objectives for each topic. The learned topic of each thematic module covered during semester is assessed with marks per the traditional 4-graded scale: 5-points, 4-points, 3-points, 2-points. Assessment forms of continuous educational activity must be standardized and include control of theoretical and practical training. The learned topic of each thematic module covered during semester is assessed with marks per the traditional (national) 4-graded scale, which are then converted into points. It takes into account all types of work provided by the discipline program. The student should receive an assessment from each topic for further conversion of marks into points on a multi-point (200-point) scale.</p> <p>Types of educational activities of students according to the educational schedule:</p> <p>a) lectures,</p> <p>b) practical classes,</p> <p>c) individual students work (SW) with teachers' consultations. Thematic plans of lectures, practical classes, ISW ensure the implementation in the educational process of all topics that are part of the content of the program. The lecture course consists of 3 lectures. The topics of the lecture course reveal the problematic issues of the relevant sections of children's infectious diseases.</p>				
Code of the results of studies	Code of the class type	Method of verifying of the results of studies	Criteria for passing	

<i>Kn-1, Ab -1, C-1, AR-1</i>	<i>L-1, P-1</i>	Written tests, oral examination, practical skills	<p>5 “excellent” – the Master acquired theoretical material of the class theme perfectly, demonstrates profound and extensive knowledge on the theme, basic rules of scientific literature sources and recommended references, thinks and responds logically, freely uses acquired theoretical knowledge for analysis of practical material, expresses his/her attitude to certain problems, demonstrates high level of acquiring practical skill;</p> <p>4 “good” – the Master acquired theoretical material of the class theme well, demonstrates basic aspects from literature sources and recommended references, can substantiate the material; possesses practical skills, expresses his/her opinion on certain problems, but makes some mistakes and speaks with ambiguities while presenting theoretical content or performing practical skills;</p>
<i>Kn-2, C-2, AR-2</i>	<i>L-1, P-1, SW-1</i>	Written tests, oral examination, practical skills	3 “satisfactory” – the Master acquired theoretical knowledge of the class theme in general, is acquainted with literature sources and recommended references, but answers unconvincingly, speaks with ambiguities, feels unconfident if asked additional questions, demonstrates lack of stable knowledge, cannot assess facts and phenomena associated with future activity, makes mistakes while performing practical skills;
<i>Kn-3, Ab-2, C-5, AR-3</i>	<i>L-1, L - 3, L – 2, P-1, SW-1</i>	Written tests, oral examination, practical skills	2 “unsatisfactory” – the Master did not learn educational material of the theme, does not know scientific facts, definitions, is hardly acquainted with literature sources and recommended references, scientific reasoning is absent, practical skills are not formed.
<i>Kn-4, Ab-3, C-4, AR-4</i>	<i>L-1</i>	Written tests, oral examination, practical skills	
<i>Kn-5, Ab-8, Ab-5, C-5, AR-5</i>	<i>L-1, L - 3, L – 2, P-1, P-2, P-3, P-4, P-5, P-6, P-7, SW-1, SW-2, SW-3, SW-4, SW-5</i>	Written tests, oral examination, practical skills	
<i>Kn-6, Ab-6, C-6,</i>	<i>L-1, L - 3, L – 2, P-1, P-2, P-3, P-4, P-5, P-6, P-7, SW-1, SW-2, SW-3,</i>	Written tests, oral examination, practical skills	<p><u>Criteria for test assessment:</u></p> <p><i>Excellent</i> – the Master did 95-100 % of the suggested tests correct!  <i>Good</i> – the Master did 80-94 % of the suggested tests correctly;</p>

	SW-4, SW-5, SW-6, SW-7, SW-8, SW-9		<p><i>Satisfactory</i> – the Master did 60.5-79 % of the suggested tests correctly;</p> <p><i>Unsatisfactory</i> – the Master did less than 60.5 % of the suggested tests correctly;</p> <p><u>Criteria for assessment of situational tasks:</u></p> <p><i>Excellent</i> – the Master completely learned theoretical material of the class theme, can link theory and practice, thus, can solve complicated situational tasks.</p> <p><i>Good</i> – the Master learned theoretical material of the theme well, correctly uses theoretical knowledge in solving situational tasks of average difficulty.</p> <p><i>Satisfactory</i> – the Master learned only basic material without details, solves only the easiest tasks, makes mistakes and indistinct statements, and is inconsistent in presenting reports.</p> <p><i>Unsatisfactory</i> – the Master does not know a considerable part of theoretical material of the class theme, makes significant mistakes, does not solve a situational task.</p> <p><u>Criteria for assessment of a set of open questions:</u></p> <p>A task includes five open questions on the theme of the practical class. Maximum points are three, which are included in the total score of a test task.</p> <p><u>Criteria for assessment of practical skills:</u></p> <p><i>Excellent</i> – the Master completely performs practical skills, can link theory and practice.</p> <p><i>Good</i> – the Master partially performs practical skills, uses theoretical statements correctly in solving practical tasks.</p> <p><i>Satisfactory</i> – the Master can perform</p>
Kn-7, Ab-3, Ab-7, C-7, AR-6	L-1, L - 3, L - 2, P-1, P-2, P-3, P-4, P-5, P-6, P-7, SW-10, SW-11, SW-12	Written tests, oral examination, practical skills	
Kn-8, Ab-4, C-8, AR-7	L - 3, L - 2, P-3	Written tests, oral examination, practical skills	
Kn-9, Ab-9, C-9, AR-8	L - 3, L - 2, P-6, P-7, SW-10, SW-11, SW-12	Written tests, oral examination, practical skills	
Kn-10, Ab-10, C-10, AR-10	L-1, P-1, P-2, P-3, P-4, P-5, P-6, P-7, P-8, SW-1, SW-2	Written tests, oral examination, practical skills	
Kn-11, Ab-11, C-11,	L-1, P-1	Written tests, oral examination, practical skills	
Kn-12, Ab-12, C-12	L-1, L - 3, L - 2, P-1, P-2, P-3, P-4, P-5, P-6	Written tests, oral examination, practical skills	
Kn-13, Ab-13, C-13	L-1, L - 3, L - 2	Written tests, oral examination, practical skills	
Kn-14, Ab-14, C-14	L-1, L - 3, L - 2, P-1, P-2, P-3, P-4, P-5, P-6	Written tests, oral examination, practical skills	

			<p>only minimum of a required practical task, is acquainted with the technique of performance.</p> <p><i>Unsatisfactory</i> – the Master cannot perform a practical skill.</p>
<b>Final control</b>			
General evaluation system	Participation in the work during the semester on a 200-point scale		
Rating scales	traditional 4-point scale, multi-point (200-point) scale, rating scale ECTS		
Conditions of admission to the final control	The student attended all practical (laboratory, seminar) classes and received at least 72 to 120 points		
Type of final control	Methods of final control	Enrollment criteria	
Credit	<p>this is a form of final control, which consists in assessing the student's mastery of educational material in the discipline on the basis of current control and completed individual test tasks during the last lesson.</p> <p>Credit is made in writing form, according to the schedule. The test lasts 2 academic hours and is carried out according to the following regulations.</p> <p><b>Stage 1</b> - Test control - 30 test tasks, 30 minutes.</p> <p>The block of test consists of 15 questions of the first level of difficulty, the maximum points that a student can receive is 15 (1 point for a question); and 20 questions of the second level of difficulty, each of which can bring 3 points, ie 60 per block.</p> <p><b>Stage 2</b> – The solve of a complex clinical task, including the definition of a preliminary clinical diagnosis, interpretation of laboratory findings, determination of therapeutic management /30 minutes/. The maximum number of points is 20 for one clinical task.</p>	<p>The maximum number of points is - 80.</p> <p>The minimum number of points is – 50.</p>	
<b>Criteria for assessing credit</b>			
Credit	<p>The block of test consists of 20 questions of the first level of difficulty, the maximum points that a student can receive is 20 (1 point for a question); and 20 questions of the second level of difficulty, each of which can bring 3 points, ie 60 per block. The maximum number of points is - 80. The minimum number of points is – 50.</p>	<p>Final Control is accepted if student's score is 50 or more points.</p>	

The maximum number of points that a student can score for the current academic activity for the semester for admission to the differentiated test is 120 points.

The minimum number of points that a student must score for the current academic activity for the semester for admission to the differentiated test is 72 points.

The calculation of the number of points is based on the grades obtained by the student on a traditional scale during the study of the discipline during the semester, by calculating the arithmetic mean (AM), rounded to two decimal places. The resulting value is converted into points on a multi-point scale as follows:

$$x = \frac{CA \times 120}{5}$$

**Scheme of allocation and distribution of points received by students:**

*For the disciplines with the final examination in a form of Semester credit* is defined as the sum of points for the current educational activity (not less than 72) and marks for the performance of individual test tasks in the last lesson (not less than 50).

Conversion of points for a discipline into the ECTS scale rates and 4-point scale (traditional). ECTS scores on the 4-point scale are not converted and vice versa.

Points of students studying in one specialty, taking into account the number of points scored from the discipline, are ranked on the ECTS scale as follows:

ECTS mark	Statistical indicator
A	The best 10 % of students
B	The following 25 % of students
C	The following 30 % of students
D	The following 25 % of students
E	The last 10 % of students

A, B, C, D, E rankings are awarded to students of this course, who study in one specialty and successfully complete the study of discipline. Students rated FX, F ("2") are not included in the list of ranked students. Students with an FX mark after reassembly automatically receive a "E" mark. The number of points for a discipline, which a student has gained, is converted into the 4-point scale as follows:

Points for discipline	Mark per the 4-point scale
From 170 to 200 points	«5»
From 140 to 169 points	«4»
From 139 points to the minimum number of points which a student should gain	«3»
Less than the minimum number of points which a student should gain	«2»

The ECTS marks are not converted into a traditional scale because the ECTS scale and the four-point scale are independent.

Objectivity of evaluation of students' educational activity is checked by statistical methods (correlation coefficient between ECTS assessment and national scale assessment).

**9. Course policy**

Educational discipline “Clinical Immunology and Allergology” is based on the principles of scientificity, self-development, humanism, democracy, continuity, personal and general responsibility, collectivity and open discussion of issues that belong to its competency.

**Academic integrity** in learning the discipline is provided by:

- **Masters** by means of:
- ✓ Individual performance of tasks during continuous assessment, individual work without using external information sources, except for those permitted for use, in particular during

- assessment of study results;
- ✓ Personal presence during all lectures and practical classes, except for the cases due to reasonable excuses;
- **Pedagogical staff** by means of:
  - ✓ Providing qualified educational services with application of educational innovation approaches in practical professional activity;
  - ✓ Independence of professional activity from political parties, public and religious organizations;
  - ✓ Improvement of professional level by self-study and self-development, refresher courses;
  - ✓ Following rules of staff regulations, working discipline, corporation ethics;
  - ✓ Objective and impartial assessment of the Masters' training results;
  - ✓ Control of Masters' following academic integrity; informing of Masters on typical violations of academic integrity and kinds of responsibility for such violation.
- **attending classes by higher education students:**
  - ✓ - Attendance at all classes is mandatory for the current and final assessment of knowledge (except for emergency reasons).
  - ✓ rearranging topics and working off missed classes by higher education students:
    - ✓ - practice of missed classes is according to the schedule of practice - rearrangement of the topic of the lesson, for which the student received a negative grade, is held at a convenient time for the teacher and the student outside the classroom, the maximum grade - "good"
    - ✓ - rearrangement of the topic during the current training and final control in order to increase the assessment is not allowed

## 10. Literature



**Basic academic literature:**

1. Skin and venereal diseases / under the editorship of Prof., Y.C. Skripkin. – Moscow: Medicina, 1995. – V. 3. – 447 p.
2. Skin and venereal diseases. Textbook / V.H.Kolyadenko, V.I. Stepanenko, P.V.Fedorych, S.I.Sklyar. – C.: Nova knyha, 2006. – 424p.
3. Skin and venereal diseases / under the editorship of V.K. Kravchenko. – K., 1995. – 300 p.
4. Savchak V.K. Practical dermatology / V. Savchak, S. Galnykina. – K.: Ukrmedknyha, 1998. – 508 p.
5. Stepanenko V.I. Dermatology. Venereology. Textbook / V.I. Stepanenko, M.M. Shupenko, O.O. Syzon [et al.] - Kyiv.: KIM, 2013. – 560 p., 257 p.

**Additional academic literature:**

1. Adaskevych V.P. Skin and venereal diseases / V.P. Adaskevych, V.M. Kozin. – M.: Med.lit., 2013. – 672p.
2. Ajzhatulov R.F. Syphilis. – Donetsk: Donechchyna, 1998. – 227 p.
3. Venericheskie bolezni. Rukovodstvo dlya vrachei. / Pod red. O.K. Shaposhnikova. – M. «Meditsina», 1991, –544p.
4. Vladimirov V.V., Zudin B.I. Kozhnye i venericheskie bolezni.-M.:Atlas.Meditsina,1980 .- 287p.
5. Djudjun A.D. ta spivavt. Infekciji, shho peredajutsja statevym shljakhom (navchalnyj posibnyk).-Kyjiv: Polighraf pljus, 2012. –133 p.
6. Koljadenko V.Gh., Fedorenko O.E., Gholovchenko D.Ja. Medycynskaja deontologhyja v dermatologhyi y venerologhyi. - K.: «Zdorov'ja», 1989. – 167 p.
7. Mavrov I.I. Osnovy diagnostiki i lecheniya v dermatologii i venerologii. – Khar'kov, 2007. – 800 p.
8. Fitspatrik T. i dr. Dermatologiya // Atlas-spravochnik. Per.s angl.- M.: Praktika , 1999.- P. 885-898.
9. Fedotov V.P. Lektsii po klinicheskoi dermatovenerologii. Tom.I. – Dnepropetrovsk, 2010. – 397 p.
10. Fedotov V.P., Dyudyun A.D., Stepanenko V.I. Dermatovenerologiya. – Dnepropetrovsk, 2011. – 651s.
11. Fedotov V.P., Makarchuk A.I. Klinicheskie lektsii po dermatovenerologii i kosmetologi. Tom. II. – Zaporozh'e –Dnepropetrovsk, 2013. – 552 p.

**11. Equipment, inventory support and software of the discipline**

The department is equipped with devices necessary for examination and conduction of a series of diagnostic and therapeutic measures, including cosmetology chair (for dermatological examination

of patients, collection of material for examination and conduction of dermatocosmetic manipulations), centrifuge (for PRP injections), disposable sets for gynecological examination (examination and collection of material), Wood's lamp (for differential diagnosis of dermatosis); instruments necessary for collection of biopsy materials; dermatoscopes for early diagnosis and differential diagnostics of skin neoplasms); electrocoagulator (for electrosurgical manipulations) etc., as well as moulages, slides and microsections. The department is equipped with computers, multifunctional copiers, printers, multimedia projectors, notebooks, display, smart TV, projector. Wireless Internet access is available.

## **12. Additional Information**

Together with the department staff, students participate in social and educational activities (Immunodeficiency days, Asthma days, Vaccination week, atopic skin care etc.).

All the practical classes are held at the Department of Clinical Immunology and Allergology 70010, Lviv, 69\_b Pekarska street

## **13. Appendices**

List 1

### **Symptoms**

1. Subfebrile Temperature/ fever
2. Hyperemia of the skin and mucous membranes
3. Itching of the skin and mucous membranes
4. Rash on the skin and mucous membranes
5. Hyperkeratosis
6. Hyper and hypopigmentation
7. Hypertrichosis, Hypotrichosis, alopecia
8. edema
9. cold
10. sneeze
11. cough
12. polyposis
13. lymphadenopathy
14. diarrhea
15. arthralgia and arthritis
16. myalgia
17. visual impairment,
18. hearing impairment,
19. impaired sensitivity
20. pain in the extremities
21. polyneuropathy
22. increase sensitivity to cold

23. increase sensitivity to heat

24. increase sensitivity to the sun

### **Syndromes**

1. lymphopenic

2. neutropenic

3. anemic and thrombocytopenic

4. eosinophilic

5. syndrome of prolonged fever

6. cryopathy syndrome

7. lymphadenopathy syndrome

8. edematous syndrome

9. chronic fatigue syndrome

10. antiphospholipid syndrome

11. autoimmune syndrome

12. immunoproliferative syndrome

13. systemic inflammatory response syndrome

14. immunoconflict

15. post-vaccination

### **List 2 (diseases)**

1. immunodeficiencies (primary, secondary)

2. sarcoidosis

3. allergic diseases

4. autoimmune diseases (hematopoietic organs, digestive organs, respiratory, cardiovascular, endocrine, nervous systems); systemic autoimmune diseases

5. immunoproliferative diseases

### **List 3 (emergencies):**

1) anaphylactic shock

2) acute urticaria

3) angioneurotic edema

2) Stevens-Johnson syndrome

3) Lyell's syndrome

#### **List 4 (laboratory and instrumental research):**

- 1) general blood test
- 2) general urine analysis and urine cytology
- 3) general feces analysis
- 4) determination of hemostasis
- 5) blood proteins and their fractions, C-reactive protein, homocysteine
- 6) serum ferritin, iron and copper
- 7) evaluation of phagocytic cells
- 8) examination of the complement system
- 9) determination of immunoglobulins A, M, G, E levels
- 10) determination of the circulating immune complexes level
- 11) determination of the lymphocytes and their subpopulations counts (cytometry; immunofluorescent identification of individual populations and subpopulations)
- 12) examination of immunocompetent cells; enzyme-linked immunosorbent assay, method ImmunoCAP, immunoblotting)
- 13) allergological tests (pre-tests; in vitro diagnosis of specific IgE, extracts and molecules)
- 14) study of the level of antinuclear antibodies, the level of specific autoantibodies
- 15) serological reactions in patients with infectious diseases
- 16) molecular genetic and genetic research
- 17) cytomorphological examination of the biopsy or puncture obtained material of the immune system, skin, mucous membranes, parenchymal organs
- 18) examination of nasal secretions and sputum
- 19) methods of instrumental visualization of the immune system,
- 20) methods of instrumental visualization of the thoracic cavity
- 21) methods of instrumental visualization of abdominal organs
- 22) X-ray of the paranasal sinuses, chest organs, conventional radiography
- 23) computed tomography
- 24) magnetic resonance imaging
- 25) positron emission tomography
- 26) functional research methods
- 27) capillaroscopy
- 28) dopplerography of the vascular system

**List 5 (medical manipulations):**

- 1) to review
- 1) to perform skin tests
- 2) to administer drugs (subcutaneously, intradermally, intramuscularly, intravenously)
- 3) be able to use epinephrine (epi-pen) in acute conditions
- 4) to provide emergency care for allergic and immunological patients
- 5) to perform artificial respiration

Creators of syllabus:

PhD, assoc. prof.

Kh. Lishchuk-Yakymovych

Head of the Department, MD, PhD, prof.

V. Chopyak