

**MINISTRY OF HEALTH OF UKRAINE  
LVIV NATIONAL MEDICAL  
UNIVERSITY  
NAMED AFTER DANYLO HALYTSKY  
DEPARTMENT OF DERMATOLOGY, VENEREOLOGY**



**WORKING PROGRAMM OF ELECTIVE COURSE BB 1.78  
«DERMATOONCOLOGY»**

for training of specialists of the second (master's) level of higher education  
field of knowledge 22 "Healthcare"  
specialty "222 "Medicine"

**VI year - Medical Faculty**

**LVIV – 2023**

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	<p><b>APPROVED BY</b> First Pro-rector for scientific and pedagogical work assoc. professor I.I. Solonynko</p>  <p><u>24</u> <u>08</u> 2023</p> 
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**WORKING PROGRAM OF ELECTIVE DISCIPLINE**  
**«DERMATOONCOLOGY» BE 1.78**

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<p><b>Discussed and approved</b> at the meeting of Department of Dermatology, Venereology Minutes No. <u>74</u> as of "<u>04</u>" <u>April</u> 2023 Head of the Department  MD, prof. Syzon O.O.</p> 	<p><b>Approved by</b> the field-specific methodological commission for therapeutic discipline Minutes No. <u>3</u> as of "<u>04</u>" <u>May</u> 2023 Head of field-specific methodological commission  prof. Radchenko O.M.</p>
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2023



**CHANGES AND ADDITIONS TO THE STUDY PROGRAM OF DISCIPLINE “DERMATOONCOLOGY ”  
SPECIALTY “222 “MEDICINE”  
FOR 2023-2024 ACADEMIC YEAR**

No	Content of changes (additions)	Minutes of meeting, date	Notes
1.	The list of general and special competences has been updated.	Minutes #72 20 Apr 2023	
2.	The list of recommended literature has been updated.	Minutes #72 20 Apr 2023	

The Chair of the Department  
of Dermatology, Venereology  
MD, prof.



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Syzon O.O.

Program of the discipline elective course «DERMATOONCOLOGY» for the IV year students (masters), who study the specialty 222 “Medicine” is composed by the staff of the department of Dermatology, Venereology of Danylo Halytsky Lviv National Medical University: head of the department, doctor of medicine prof. O.O. Syzon, PhD assoc. prof: I.D. Babak, I.Ya. Vozniak, M.O. Dashko, G.E. Astsaturov, I.O. Chaplyk-Chyzho, assit.prof. V.V. Protsak.

Reviewer:

Head of the Department of Propedeutics of Pathological Anatomy and Forensic Medicine  
of LNMU named after Danylo Halytsky, MD, professor, *Yury O. Pospishil*

Head of the Department of Oncology and Radiology FPGE of LNMU named after Danylo Halytsky,  
MD, professor *Volod'ko Natalia A.*

## GENERAL SECTION

Working educational program on the discipline elective course “Dermatooncology” compiled for field of knowledge 22 "Healthcare" specialty “222 “Medicine” is aimed at qualitative training of Medical faculty students in the field of dermatooncology.

The course of Dermatooncology is provided during XI-XII semesters of the 6th year of study. Study of dermatooncology is based on students’ learning of such disciplines as dermatology, oncology, anatomy, histology, biophysics, biochemistry, physiology and integrates with these disciplines.

It provides fundamentals for students’ learning of disciplines as dermatology and venereology, oncology, microbiology, surgery and pharmacology.

Lays the foundation for students to study modern ideas about benign and malignant skin tumors, precancerous skin conditions, modern diagnostic technologies, which are widely used in the diagnosis of not only dermatooncological diseases, but also in general clinical practice, that involves the integration of teaching with different disciplines and the formation of skills to apply knowledge of modern diagnostic methods (histopathology, dermatoscopy, molecular methods) and treatment in the process of further training and professional activities.

The study implies obtaining knowledge in etiology, carcinogenesis, epidemiology of skin neoplasms with malignant course, risk factors of its development and needs the integration of classical clinical concepts and modern high-tech diagnostics and treatment of these diseases.

### **The Program is designed in accordance with the following regulatory documents:**

- The working program of the elective course "Dermatooncology" for students of the VI year of the Faculty of Medicine in the specialty 222 "Medicine" is concluded on the basis of the educational and professional program "Medicine" of the second (master's) level of higher education in the specialty 222 "Medicine" field of knowledge 22 Health care, decision of the Academic Council of the Danylo Halytsky National Medical University 15.Feb.2023 (protocol No. 1-BP) and Regulations on the organization of the educational process at the Danylo Halytsky Lviv National Medical University, adopted by the Academic Council and by the rector of the university No. 656-z dated 15.Feb.2023. The purpose of the Regulation is to standardize the content, scope, sequence and organizational forms of studying the discipline by students, as well as the forms and means of current and final control of knowledge.

- educational qualification characteristics (EQC), educational and occupational programs (EOP) on training specialists approved by the Order of MoH of Ukraine as on 16 April 2003 No.239 “On approval of components of industry standard of higher education per the field of knowledge 222 “Medicine”;

- experimental curriculum developed based on the principles of the European Credit Transfer System (ECTS) and recommended by the letter of MoH of Ukraine as of 21 March 2015 No.08.01-47/8986 approved by the Rector of Lviv National Medical University named Danylo Halytsky as on 24 April 2015 No.1226 – 3;

- recommendations on academic disciplines curriculum development approved by the Order of MoH of Ukraine as on 24 March 2004 No.152 “On approval of recommendations on academic disciplines curriculum development” as amended and supplemented by the Order of MoH of Ukraine as of 12 October 2004 No.492 “On amendments and additions to the recommendations on academic disciplines curriculum development”;

- instruction for evaluating educational activity of students in accordance with the provisions of the European Credit Transfer System (ECTS) approved by MoH of Ukraine as on 14 April 2014.

### **The discipline Program is structured in 6 thematic modules which end with a credit.**

#### ***Thematic modules:***

1. Propaedeutics in Dermatology.
2. Fundamentals of dermatopathology
3. Skin neoplasms with benign course.
4. Skin neoplasms with malignant course

5. Modern diagnostic methods in Dermatoonology
6. Modern therapeutic methods in Dermatoonology

The ECTS system encourages students to learn systematically during the academic year. According to the curriculum the types of educational activities are as follows:

- a) practical classes,
- b) individual work of students (ISW);

In its organization the advices given by teachers play a significant role.

Thematic plans of lectures, practical classes and IWS provide implementation of all topics covered by thematic modules into the educational process.

Teachers' counseling on the work of oncological centers plays a significant role in organization of scientific process. Thematic plans for practical classes, individual work provide implementation of all themes included in thematic modules into educational process.

### Description of curriculum for elective course « DERMATOONCOLOGY »

Structure of academic discipline	Quantity of hours, out of them				Year of studying	Type of control
	Total	Classroom hours		ISW		
		Lectures	Practical classes			
<b>Credit «Dermatoonology»: Thematic modules – 6</b>	<b>3 ECTS credits / 90 hours</b>	-	<b>36</b>	<b>54</b>	<b>6th year</b>	<b>credit</b>

Classroom load – 40%, ISW – 60%

#### 1. The subject of the study of the discipline are:

*The aim of studying DERMATOONCOLOGY – the final objectives* are set on the basis of EOP for training doctors according to the package of its thematic module (natural and scientific training) and is the basis for designing the content of academic discipline:

- to generalize the classification and features of dermatooncological diseases;
- to understand the general course and the clinic of dermatooncological diseases;
- to determine clinical peculiarities of skin tumors with benign and malignant course;
- to interpret modern ideas about the etiopathogenesis of dermatooncologic diseases;
- to explain the role of the different factors that cause the development of skin cancer;
- to determine the algorithm for screening patients at high risk for the development of dermatooncologic diseases or patients with already existing benign and / or malignant tumors of the skin;
- to analyze and to interpret the results of the survey;
- to generalize the principles of early diagnosis of skin malignant tumors, to explain the role of screening tests in the early diagnosis of melanoma of the skin;
- to be able to conduct differential diagnosis of these diseases
- to treat the results of a histopathological study;
- to determine indications for a specific type of therapeutic intervention.

#### **Interdisciplinary integration:**

the elective course «Dermatoonology» as a discipline

a. 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;

b. lays the foundations of a study such clinical disciplines as dermatovenereology, oncology, surgical stomatology, microbiology, surgery and pharmacology;

c. forms the idea to prevent the development of various neoplastic skin pathology.

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

*-general (GC):*

GC 1. The ability to abstract thinking and analysis;

GC 2. The ability to learn and acquire modern knowledge.

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 10. Skills in the use of information and communication technologies.

GC 11. Ability to search, process and analyze information from various sources.

GC 12. Determination and persistence in relation to assigned tasks and assumed responsibilities.

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

SC 1. Patient interviewing skills, skills of examination of the patient and analyze clinical data.

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 regime of work and rest in the treatment and prevention of dermatological diseases.

SC 5. Ability to determine the principles of nutrition in treatment and prevention of diseases.

SC 6. Ability to determine the principles and nature of treatment and prevention of skin and venereal diseases.

SC 7. Ability to diagnose emergency conditions in dermatovenereology.

SC 8. Ability to determine the tactics of emergency medical care.

SC 10. 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 carry out a work capacity examination.

SC 16. Ability to keep medical records, including electronic forms.

SC 17. Ability to assess the impact of the environment, socio-economic and biological determinants on the health of the individual, family, population.

SC 24. Compliance with ethical principles when working with patients.

SC 25. Observance of professional and academic integrity, bear responsibility for the reliability of the obtained scientific results.

Determination of competencies according to the descriptors of the NRC in the form of "Matrix of competencies".

№	Competency	Knowledge	Abilities	Communication	Autonomy and responsibility
<i>General competencies</i>					

**Programme Results (PR) of the Course:**

<b>1</b>	The ability to abstract thinking and analysis.	To know the current trends in the industry and indicators that characterize them.	Be able to conduct an analysis of professional information, make informed decisions, acquire modern knowledge.	Establish appropriate relationships to achieve goals.	Be responsible for the timely acquisition of knowledge.
<b>2</b>	Ability to learn and master modern knowledge.	Know the peculiarities of the professional activity of a cosmetologist.	To be able to carry out professional activities that require updating and integration of knowledge.	Ability to search, process and analyze information from various sources.	To be responsible for the timely acquisition of knowledge.
<b>3</b>	Ability to apply knowledge in practical situations.	To know the peculiarities of the professional activity of the dermatologist.	Be able to carry out professional activities that require updating and integration of knowledges.	To form a communication strategy in professional activity.	Be responsible for continuous development with a high level of autonomy.
<b>4</b>	Ability and understanding of subject area and profession.	Know the methods of realizing knowledge in solving practical problems.	Be able to use professional knowledge to solve practical problems.	To establish contacts with the subjects of practical activity.	Be responsible for the reasonableness of the taken decisions.
<b>5</b>	Ability to adapt and act in a new situation.	To know the methods of realizing knowledge in solving practical problems.	To be able to use professional knowledge for adaptation and action in a new situation.	To establish contacts with the subjects of practical activity.	To be responsible for the quality of performing professional tasks in a new situation.
<b>6</b>	Ability to make informed decisions.	Know the methods of implementing knowledge in identifying, setting and solving problems of professional activity.	Be able to analyze professional information, make informed decisions, acquire modern knowledge.	Form a communication strategy in professional activities.	To be responsible for the validity of the decisions made.
<b>7</b>	Ability to work in a team.	Know how to collaborate on teamwork.	To be able to use knowledge to choose a communication strategy during teamwork.	To form a communication strategy in professional activity.	To be responsible for continuous professional development.
<b>8</b>	Ability to interpersonal interaction.	To know the methods of realizing	To be able to use knowledge to choose a strategy for	To form a communication strategy	To be responsible for continuous



		knowledge in choosing a strategy for communicating with patients and colleagues.	communicating with patients and colleagues.	in professional activity.	professional development with a high level of autonomy.
<b>10</b>	Ability to use information and communication technologies.	To know how to interact with colleagues and patients.	To be able to use knowledge to choose a communication strategy during teamwork.	To form a communication strategy in professional activity.	To be responsible for continuous professional development with a high level of autonomy.
<b>11</b>	Ability to search, process and analyze information from various sources.	To have the necessary knowledge in the field of information technology applied in professional activity in Ukrainian and foreign languages.	Being able to use information technology in the professional field to search, process and analyze new information from different sources and in different languages.	To use information technology in professional activities.	To be responsible for the continuous development of professional knowledge and skills in Ukrainian and foreign languages.
<b>12</b>	Determination and persistence in relation to assigned tasks and assumed responsibilities.	To know the methods of realizing knowledge in identifying, staging and solving problems of professional activity.	To be able to use professional knowledge to identify, articulate and solve professional problems.	To establish contacts with the subjects of practical activity with the purpose of revealing, setting and solving problems of professional activity.	To be responsible for the reasonableness of the decisions taken to solve problems of professional activity.

***Special (professional competencies)***

<b>1</b>	Ability to collect medical information about the patient and analyze clinical data.	Know the current legal norms of the relationship between a doctor and a dermatovenerologist → a patient.	To be able to collect and interpret complaints, disease and life anamnesis, conduct a physical examination (using dermatological tests) of specialized patients.	To determine the etiological and pathogenetic factors of the appearance and subsequent clinical course of	To bear personal responsibility for the correctness of anamnesis collection, examination and identification of the main risk factors for the
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				the most common skin and venereal diseases in humans.	development of skin and venereal diseases.
2	The ability to determine the necessary list of laboratory and instrumental studies and to evaluate the evaluation of their results.	To know the algorithm of the examination of dermatologic patient, functional methods of examination.	To be able to conduct a survey of a dermatologic patient, to prescribe laboratory examinations and consultations of adjacent specialists.	To understand the importance of basic and additional methods of examination to establish the correct diagnosis followed by treatment plan.	To take personal responsibility for the correctness of the dermatological examination and additional investigation.
3	Ability to establish a preliminary and clinical diagnosis.	Know the theoretical foundations of the dermatological alphabet for skin lesions.	Be able to establish the correct preliminary and clinical diagnoses based on the analysis of the obtained results.	To determine the etiological and pathogenetic factors of the appearance and subsequent clinical course of the most common skin and venereal diseases in humans.	To bear personal responsibility for the correctness of the stages of examination of a dermatological patient and the conduct of additional examination methods.
4	The ability to determine the necessary regime of work and rest in the treatment and prevention of dermatological diseases.	To know the basic principles and methods of treatment of patients with dermatovenerological pathology, the criteria for cure, the required volume of recommendations, types and degrees of disability of	To be able to provide differentiated recommendations regarding the mode of work and rest in the treatment and prevention of dermatological diseases.	Form a communication strategy in professional activities.	Be responsible for continuous professional development with a high level of autonomy.

		dermatovenerological patients.			
5	The ability to determine the nature of nutrition in the treatment and prevention of cosmetological diseases.	Know the main nutritional regimes in the treatment and prevention of dermatological diseases.	Be able to prescribe an appropriate diet for the treatment and prevention of dermatological diseases.	Determine the tactics of managing a patient with skin and venereal diseases	. To be responsible for the validity of the decisions made.
6	Ability to determine the principles and nature of treatment and prevention of cosmetological diseases.	To know the basic treatment principles and methods of patients with skin pathology. To know the basic principles of cosmetological diseases prevention.	To be able to characterize the basic principles and methods of treatment of patients with skin and venereal diseases. To know the basic principles of cosmetological diseases prevention.	To understand the importance of knowing the basic principles and treatment methods of patients with oral mucosal lesions in case of cosmetological diseases. To know the dermatological functional methods of examination	To take personal responsibility for the knowledge of the basic principles and methods of treating patients with skin and venereal diseases.
7	Ability to diagnose emergency conditions in dermatovenerology.	Know the main manifestations, methods of diagnosis and algorithms of action in case of emergency conditions in dermatovenerological practice.	To be able to diagnose conditions that require emergency medical care in the practice of a dermatovenerologist.	Skills of conducting safe activities, the ability to evaluate and ensure the quality of work performed.	To be responsible for the validity of the decisions made.

<b>8</b>	Ability to determine tactics and provide emergency medical care.	Know the main manifestations, methods of diagnosis and algorithms of action in case of emergency conditions in dermatovenerological practice.	Be able to provide emergency medical care in the practice of a dermatovenerologist.	Skills of conducting safe activities, the ability to evaluate and ensure the quality of work performed.	To be responsible for the validity of the decisions made.
<b>10</b>	Ability to perform medical manipulations.	Know the methods and techniques of diagnostic and therapeutic manipulations that can be used in the work of a dermatovenerologist.	To have the methods and techniques of conducting diagnostic and therapeutic manipulations that can be used in the work of a dermatovenerologist.	Determine the tactics of managing a patient with skin and venereal diseases.	To bear personal responsibility for possessing knowledge at a sufficient level regarding the basic principles and methods of treatment of patients with skin and venereal diseases.
<b>13</b>	Ability to carry out sanitary and hygienic and preventive measures.	Know the basics of prevention of skin (including contagious) and venereal diseases.	Be able to carry out professional activities in compliance with safety rules.	To determine the etiological and pathogenetic factors of the appearance and subsequent clinical course of the most common skin and venereal diseases in humans.	To bear personal responsibility for possessing knowledge at a sufficient level regarding the basic principles and methods of prevention and prevention of the spread of skin and venereal diseases.
<b>14</b>	Ability to plan and carry out preventive and anti-epidemic measures regarding	Know the basics of prevention of skin (including contagious) and venereal diseases.	Be able to carry out early diagnosis of skin and venereal diseases, be able to plan and implement measures to prevent	Organization of work on the prevention of skin and venereal diseases in	To bear personal responsibility for possessing knowledge at a sufficient level

	infectious diseases.		the spread of these diseases.	various dispensary groups.	regarding the basic principles and methods of prevention and prevention of the spread of skin and venereal diseases.
<b>15</b>	Ability to conduct an examination of work capacity.	To know the main criteria for determining the degree of limitation of life activity, type, degree and duration of incapacity to work.	Determine the presence and degree of restrictions on vital activities, the type, degree and duration of incapacity with the preparation of relevant documents.	Determine the tactics of managing a patient with skin and venereal diseases.	To be responsible for the validity of the decisions made.
<b>16</b>	Ability to maintain medical documentation, including electronic forms.	Know the current legal norms of the relationship between a doctor and a dermatovenerologist → a patient.	Be able to keep the documentation necessary for the work of a dermatovenerologist (medical history, outpatient card, sick leave, reports, etc.).	Establish appropriate connections to achieve goals.	To bear personal responsibility for compliance with the current legal norms of the relationship between the doctor - dermatovenerologist → patient".
<b>17</b>	The ability to assess the impact of the environment, socio-economic and biological determinants on the state of health of an individual, family, population.	Know the main factors of influence of the environment, socio-economic and biological determinants on the state of health of an individual, family, population.	Be able to determine the influence of environmental factors, socio-economic and biological determinants on the state of health of an individual, family, population.	To establish connections with subjects of practical activity.	To be responsible for the quality of the performance of professional tasks in a new situation.
<b>24</b>	Compliance with ethical principles when working with patients.	Know the basic provisions of The ethical code of the dermatologist	Use in practice of the Ethical code of the dermatologist	Keep in touch with patients and colleagues according to the Ethical Code of the	To have personal responsibility for compliance with the provisions of the practice

				dermatologist	The ethical code of the dermatologist.
25	Observance of professional and academic integrity, bear responsibility for the reliability of the obtained scientific results.	The ability to work autonomously, demonstrate skills and pose and solve problems, guided by public rights, responsibilities with continuous improvement of the professional level.	To be able to carry out professional activities that require updating and integration of knowledge.	Skills of conducting safe activities, the ability to evaluate and ensure the quality of work performed.	To be responsible for the quality of the performance of professional tasks.

PR1. To have a thorough knowledge of the structure of professional activity. To be able to carry out professional activities that require updating and integration of knowledge. To be responsible for professional development, the ability for further professional training with a high level of autonomy.

PR2. Understanding and knowledge of fundamental and clinical biomedical sciences, at a level sufficient for solving professional tasks in the field of health care.

PR3. Specialized conceptual knowledge, which includes scientific achievements in the field of health care and is the basis for conducting research, critical understanding of problems in the field of medicine and related interdisciplinary problems.

PR4. To identify leading clinical symptoms and syndromes; according to standard methods, using preliminary data of the patient's history, data of the patient's examination, knowledge about the person, his organs and systems, to establish a preliminary clinical diagnosis of the disease.

PR5. To collect complaints, history of life and diseases, evaluate psychomotor and physical development of an adult patient and child, the state of organs and body systems, based on the results of laboratory and instrumental studies, evaluate information about the diagnosis, taking into account the age of the patient.

PR6. To establish a final clinical diagnosis by making a reasoned decision and analyzing the received subjective and objective data of clinical, additional examination, carrying out differential diagnosis, observing the relevant ethical and legal norms, under the control of the head physician in the conditions of a health care institution .

PR7. To prescribe and analyze additional (mandatory and optional) examination methods (laboratory, functional and/or instrumental) of patients with diseases of organs and body systems for differential diagnosis of diseases.

PR8. Determine the leading clinical syndrome or determine what causes the severity of the patient's condition (according to list 3) by making a reasoned decision and assessing the person's condition under any circumstances (in the conditions of a health care facility and outside of it, including in conditions of an emergency and hostilities, in field conditions, in conditions of lack of information and limited time).

PR9. To determine the nature and principles of treatment (conservative, operative) of patients with diseases, taking into account the age of the patient, in the conditions of a health care institution, outside its borders and at the stages of medical evacuation, including in field conditions, on the basis of a preliminary clinical diagnosis, observing the relevant ethical and legal norms, by making a reasoned decision according to existing algorithms and standard schemes, in case of the need to expand the standard scheme, be able to substantiate personalized recommendations under the control of the head physician in the conditions of a medical institution.

PR10. To determine the necessary mode of work, rest and nutrition on the basis of the final clinical diagnosis, observing the relevant ethical and legal norms, by making a reasoned decision according to existing algorithms and standard schemes.

PR14. Determine tactics and provide emergency medical care in emergency situations (according to list 3) in limited time conditions according to existing clinical protocols and standards.

PR17. Perform medical manipulations in the conditions of a medical institution, at work and at the patient's home based on a previous clinical diagnosis and/or indicators of the patient's condition by making a reasoned decision, observing the relevant ethical and legal norms.

PR18. To determine the state of functioning and limitations of a person's vital activities and the duration of incapacity for work with the preparation of relevant documents, in the conditions of a health care institution, based on data on the disease and its course, peculiarities of a person's professional activity, etc. Maintain medical documentation regarding the patient and the contingent of the population on the basis of regulatory documents.

PR19. To plan and implement a system of anti-epidemic and preventive measures regarding the occurrence and spread of diseases among the population.

PR21. To search for the necessary information in the professional literature and databases of other sources, analyze, evaluate and apply this information.

PR22. To apply modern digital technologies, specialized software, statistical methods of data analysis to solve complex problems of health care and research work.

PR23. To assess the impact of the environment on the state of human health to assess the state of morbidity of the population.

PR24. To organize the required level of individual safety (own and the persons they care about) in case of typical dangerous situations in the individual field of activity.

## **2. PROGRAM OF ACADEMIC DISCIPLINE**

### **Thematic module 1.**

#### **PROPAEDEUTICS IN DERMATOLOGY.**

History of dermatology, venereology and dermatooncology development. Anatomy, histology and physiology of skin. Age characteristics of the skin. The main types of skin. The influence of various factors on the skin and visible mucous membranes. Methods of examination of skin, its appendages, mucous membranes. Elements of skin rash.

*Anatomy and histology of skin.* Three layers of skin i.e. the epidermis, dermis and subcutaneous tissue (hypodermis), their anatomy and functions. Characteristics of the layers of skin. Anatomical constituents of skin include its appendages, which consist of: sweat glands, sebaceous glands, hair, nails. Blood and lymphatic vessels in the skin. Nervous system of the skin.

*Skin Functions:* protective, immune, melanin-forming, thermoregulatory, secretory, excretory, □ metabolic, receptor, sorption, respiratory, repository etc. damage to the tissues and organs, breach of circulatory and metabolic processes therein.

*Pathological processes that can develop in the epidermis:* alteration, exudation, acanthosis, acantholysis, dyskeratosis (hyper-, parakeratosis), granulosis.

*Primary morphological elements of rash:* spot (macula), blister (urtica), vesicle (vesicula), blister/vesicle (bulla), pustulation (pustula), nub (papula), hillock (tuberculum), node (nodus), swelling (tumor), cyst (cista).

*Secondary elements:* secondary pigment spot, scale (squama), erosion (erosio), wound (ulcus), crust (crusta), crust scale (crusta-laminosa), fissure (fissura seu raqades), excoriation (syn. traumatic erosion), scar (cicatrix), scab ("sphacelus"), lichenification (lichenificatio, syn. lichenisatio), vegetation (vegetatio).

Characteristics of the main types of skin.

Age characteristics of the skin.

The influence of various factors on the skin and visible mucous membranes.

### **Thematic module 2. FUNDAMENTALS OF DERMATOPATHOLOGY.**

Fundamentals of skin histopathology. Terminology. Method of skin biopsy. Pathohistological technique.

Histopathology of skin neoplasms with a benign course.

Histopathology of skin neoplasms with malignant course.

### **Thematic module 3. SKIN NEOPLASMS WITH BENING COURSE.**

Classification. Etiology. Risk factors. The concept of melanocytic nevi (main groups, clinical features), prognosis. Congenital melanocytic nevus. Non-tumor pigmentation. Epidermal benign neoplasms of the skin and subcutaneous fatty tissue.

Precancerous neoplasms of skin (actinic keratosis, xeroderma pigmentosum, leukoplakia). Trigger factors of malignant transformation of the epidermis and others layers of the skin. Facultative paraneoplastic dermatoses. Precancerous neoplasms of skin. COVID - 19 skin manifestations, differential diagnosis with benign and malignant tumors.

#### **Thematic module 4. SKIN NEOPLASMS WITH MALIGNANT COURSE**

Classification. Etiology and epidemiology of skin neoplasms with a malignant course. Basal cell carcinoma of the skin. Bowen's disease. Erythroplasia of Queyrat.

Nonmelanoma skin tumors. Basal cell carcinoma of the skin. Squamous cell carcinoma.

Melanoma of the skin. Etiology, epidemiology. Melanoma screening. The main clinical and morphological forms of melanoma and diagnostic methods.

#### **Thematic module 5. MODERN DIAGNOSTIC METHODS IN DERMATOONCOLOGY**

Dermatoscopy. Terminology, equipment, technique. Basic algorithms for evaluation of dermatoscopic images.

Dermatological signs of neoplasms with benign and malignant courses.

Molecular and immunohistochemical diagnostic methods. Confocal microscopy.

#### **Thematic module 6. MODERN THERAPEUTIC METHODS IN DERMATOONCOLOGY**

Physical therapeutical methods: curettage, diathermocoagulation, cryotherapy. Radiation therapy.

Fundamentals of dermatosurgery. Local anesthesia. Surgical Instruments. Cutting lines of the skin. Micrographic surgery.

Phototherapeutic methods: lasers and photodynamic therapy.

Medication therapy of skin cancer: topical immunomodulators, chemotherapy, vaccines.

### **3. STRUCTURE OF ACADEMIC DISCIPLINE «DERMATOONCOLOGY»**

<b>TOPIC</b>	<b>Practical classes</b>	<b>ISW</b>
1. History of dermatology and venereology development. Anatomy, histology and physiology of skin. Age characteristics of the skin. The main types of skin. The influence of various factors on the skin and visible mucous membranes. Methods of examination of skin, its appendages, mucous membranes. Elements of skin rash.	6	-
2. Fundamentals of dermatopathology. Fundamentals of skin histopathology. Terminology. Method of skin biopsy. Pathohistological method. Histopathology of skin neoplasms with benign course. Histopathology of skin neoplasms with malignant course.	6	6
3. Classification of skin tumors. Skin neoplasms with nonmalignant course. Precancerous neoplasms of skin. COVID - 19 skin manifestations, differential diagnosis with benign and malignant tumors.	6	15
4. Etiology and epidemiology of skin neoplasms with malignant course. Risk factors. Molecular and genetic basis of carcinogenesis.	6	15
5. Dermatoscopy. Terminology, equipment, technique. Basic algorithms for evaluation of dermatoscopic images. Dermatological signs of neoplasms with benign and malignant courses. Molecular and immunohistochemical diagnostic methods. Confocal microscopy.	6	8
6. Therapeutic methods: physical (curettage, diathermocoagulation, cryotherapy. Radiation therapy. Fundamentals of dermatosurgery. Local anesthesia. Surgical Instruments. Cutting lines of the skin. Micrographic surgery. Phototherapeutic methods: lasers and photodynamic therapy.	6	10



Medication therapy of skin cancer: topical immunomodulators, chemotherapy, vaccines. Credit.		
<b>Total hours - 90-3,0 ECTS Credits</b>	<b>36 hours</b>	<b>54 hours</b>
<b>Final assessment</b>	<b>Credit</b>	

**Note:** Classroom load – 40%, ISW – 60%

#### 4. THEMATIC OUTLINE OF PRACTICAL CLASSES

No p/o	TOPIC	Q-ty of hours
1.	History of dermatology and venereology development. Anatomy, histology and physiology of skin. Age characteristics of the skin. The main types of skin. The influence of various factors on the skin and visible mucous membranes. Methods of examination of skin, its appendages, mucous membranes. Elements of skin rash.	6
2.	Fundamentals of dermatopathology. Fundamentals of skin histopathology. Terminology. Method of skin biopsy. Pathohistological method. Histopathology of skin neoplasms with benign course. Histopathology of skin neoplasms with malignant course.	6
3.	Classification of skin tumors. Skin neoplasms with nonmalignant course. Precancerous neoplasms of skin. Precancerous neoplasms of skin. COVID - 19 skin manifestations, differential diagnosis with benign and malignant tumors.	6
4.	Etiology and epidemiology of skin neoplasms with malignant course. Risk factors. Molecular and genetic basis of carcinogenesis.	6
5.	Dermatoscopy. Terminology, equipment, technique. Basic algorithms for evaluation of dermatoscopic images. Dermatological signs of neoplasms with benign and malignant courses. Molecular and immunohistochemical diagnostic methods. Confocal microscopy.	6
6.	Therapeutic methods: physical (curettage, diathermocoagulation, cryotherapy. Radiation therapy. Fundamentals of dermatosurgery. Local anesthesia. Surgical Instruments. Cutting lines of the skin. Micrographic surgery. Phototherapeutic methods: lasers and photodynamic therapy. Medication therapy of skin cancer: topical immunomodulators, chemotherapy, vaccines. Credit.	6
<b>Total</b>		<b>36</b>

#### 5. THEMATIC OUTLINE OF INDIVIDUAL WORK

No. p/o	TOPIC	Q-ty of hours
1.	Fundamentals of skin histopathology. Terminology.	3
2.	Tumors of muscle (angioliomyoma, leiomyosarcoma) and adipose tissue (lipoma, angiolipoma, hibernoma, liposarcoma).	3
3.	Precancerous epithelial lesions of the skin (keratoses, leukoplakias, xeroderma pigmentosum, etc.).	5
4.	Vascular tumors and malformations. Vascular anomalies. Vascular, capillary, venous malformations. Angiokeratomas. Pyogenic granuloma. Angiomas. Malignant vascular tumors.	5
5.	Epithelial tumors of the skin.	5
6.	Tumors of skin appendages: sweat glands, sebaceous glands, hair follicles.	5
7.	Tumors of the melanogenic system.	5
8.	Melanomas, forms, diagnosis, course, prognosis, metastases, treatment, prevention.	5

9.	Freckles Lentigo (youthful, senile, reticular). Lentiginosis of mucous membranes, periostic, congenital systemic, associated with systemic diseases. PUVA-lentigo. Syndromes with lentigo.	5
10.	Immunology of skin tumors.	3
11.	Squamous cell skin cancer. Pathogenesis, histological variants, treatment. Special forms of squamous cell cancer (lips, oral cavity, tongue, vulva, penis).	5
12.	Basal cell skin cancer. Pathogenesis, epidemiology, clinic, histology, course, prognosis, treatment, prevention.	5
<b>Total</b>		<b>54 hours</b>

## 5. FORMS OF CONTROL

The form of a final control of theoretical and practical material learned by the student according to the discipline program is a **semester credit**. It is the assessment of learned by a student material based on the results of all types of academic works performed by a student, which are foreseen under the Academic Program.

**Continuous control** is carried out during each practical according to the specific objectives for each topic. When assessing students' educational activity it is necessary to give preference to the standard based methods of control: testing, structured written work, structured control of practical skills in conditions close to real.

Criteria of assessment of student's continuous educational activity. The learned topic of each thematic module covered during semester is assessed with marks per the traditional 4-graded scale, which are then converted into points depending on:

### Recalculation of mean mark for the continuous educational activity into multi-grade scale:

4-point scale	200-point scale	4-point scale	200-point scale	4-point scale	200-point scale	4-point scale	200-point scale
5	200	4,45	178	3,92	157	3,37	135
4,97	199	4,42	177	3,89	156	3,35	134
4,95	198	4,4	176	3,87	155	3,32	133
4,92	197	4,37	175	3,84	154	3,3	132
4,9	196	4,35	174	3,82	153	3,27	131
4,87	195	4,32	173	3,79	152	3,25	130
4,85	194	4,3	172	3,77	151	3,22	129
4,82	193	4,27	171	3,74	150	3,2	128
4,8	192	4,24	170	3,72	149	3,17	127
4,77	191	4,22	169	3,7	148	3,15	126
4,75	190	4,19	168	3,67	147	3,12	125
4,72	189	4,17	167	3,65	146	3,1	124
4,7	188	4,14	166	3,62	145	3,07	123
4,67	187	4,12	165	3,57	143	3,02	121
4,65	186	4,09	164	3,55	142	3	120
4,62	185	4,07	163	3,52	141	Less than 3	Insufficient
4,6	184	4,04	162	3,5	140		
4,57	183	4,02	161	3,47	139		
4,52	181	3,99	160	3,45	138		
4,5	180	3,97	159	3,42	137		
4,47	179	3,94	158	3,4	136		

The maximum number of points a student can gain for continuous educational activity when

**studying the discipline is 200 points.**

**The minimum number of points a student can gain for continuous educational activity when studying the discipline is 120 points.**

The form of **semester control** is **semester credit**, which is foreseen under the Academic Program and in terms, based on working thematic outline.

Semester credit – is form of final control based on the mastering level of student on educational material, exclusively based on results of all types of academic works performed by a student. Semester credit calculated is based on the results of continuous control.

*Assessment of individual work of students (individual tasks):*

Assessment of individual work of students, which is included into practical themes, is carried out during continuous control at each practical auditorium class.

Assessment of topics, which are not included into themes of practical classes, is controlled at the final class.

## **6. LIST OF QUESTIONS BROUGHT TO THE FINAL (CONTINUOUS) CONTROL**

### **GENERAL PART**

1. Brief historical outline of the history of dermatooncology. Anatomy and histology of normal skin. Additional skin elements: hair, hair follicles, nails. Epidermis, as the outer layer of the skin: its structure and functions. Characteristics of the hypodermis. The circulatory and lymphatic systems of the skin. Nervous receptor skin. Glandular apparatus of the skin (sweat and sebaceous glands), its structure and functions.

2. Skin functions: protective, barrier, thermal-regulating, secretory, excretory, resorptive, breathing (respiratory), sensitive, metabolic etc.

3. Histomorphological skin changes: alteration, exudation, proliferation degeneration, acanthoma, acantholysis, dyskeratosis (hyper-, parakeratosis), granulosis.

4. Primary and secondary morphological elements, their description and examples of diseases at which these elements are met.

5. Characteristics monomorphic and polymorphic rashes.

6. Methods of dermatological patient examination. Stages of diagnostic process.

7. Special dermatological methods of patient examination (palpation, diascopy, isomorphic skin reaction test, dermatography, allergic skin tests).

8. Laboratory diagnostic methods (general and specific).

10. Method of examination of the profile patient.

11. Methods of diagnosis used in dermatooncology.

12. Method of skin biopsy. Dermatoscopy as non-invasive diagnostic method.

### **SPECIAL PART**

1. Melanocytic nevi.

2. Clinical and histological features of melanocytic nevi of epidermal origin.

3. Blue nevus - as a representative of melanocytic nevi of terminal origin.

4. Benign dermal melanosis (Mongolian spot, nevus) and their features. Congenital melanocytic nevi.

Non-tumor pigmentation: freckles, lentigo. Differential diagnostics, prophylaxis.

5. Benign neoplasms of the skin of epidermal origin.

6. Precancerous epithelial neoplasms of the skin. Neoplasms of skin appendages.

7. Diagnosis and histopathology of epidermal nevi. Classification of epidermal nevus: papillomatous, warty, acantolytic (different species), inflammatory linear.

8. Classification of benign epidermal tumors: Seborrheic keratosis, pale cell acanthoma, cutaneous horn.

9. Keratoacanthoma (classification, stages of its development, atypical forms).

10. Warty (viral etiology) skin lesions.

11. Benign tumors of the dermis and subcutaneous fatty tissue.

12. Precancerous epithelial lesions of the skin (actinic keratosis, xeroderma pigmentosum, leukoplakia).

13. Trigger factors of malignant transformation of the epidermis and others layers of the skin.
14. Benign tumors of the sweat and sebaceous glands: papillary eccrine adenoma, adenoma of sebaceous glands. Becker's nevus. Seborrheic nevus.
15. Hair cyst (trichilemmal (pilar) cyst).
16. Facultative paraneoplastic dermatosis (tumor induced cryoglobulinemia, acquired keratoderma of palms and soles, acquired ichthyosis, dermatomyositis in adults, congenital dyskeratosis, Gardner syndrome, Blum syndrome.
17. Kancerogenesis of skin tumors.
18. Immunology of skin tumors.
19. Melanomas (etiology, epidemiology). Melanoma screening.
20. The main clinical and morphological forms of melanoma.
21. Methods of diagnosis of melanoma.
22. General principles of melanoma treatment. Indications for surgical methods, radiation and chemotherapy. Immunotherapy of melanoma.
23. Intra-epidermal forms of squamous cell carcinoma of the skin: Bowen's disease, Erythroplasia of Queyrat.
24. Squamous cell carcinoma and its clinical forms. Methods of treatment.
25. Basal cell carcinoma of the skin.

#### **7. LIST OF RECOMMENDED LITERATURE**

1. Gawkrödger, David, Ardern-Jones, Michael R.: Dermatology: An Illustrated Colour Text. (Eng). 2023.
2. Koljadenko V.Gh., Fedorenko O.Je. General issues of the pathogenesis of skin diseases. Dermatological pathology as a medical and psychological problem. Deontology in dermatology. Textbook for student selfeducation. (Ukr). K.:NMU. 2005:20.
3. Koljadenko V.Gh., Fedorenko O.Je. Pyoderma. Textbook for student selfeducation. (Ukr). K.:NMU. 2006:23.
4. Lomotkin I.A. Tumors and tumor-like skin lesions: Atlas. M.: BINOM. 2006:5-6.
5. Oncology: a national textbook under the editorship NAMS of Ukraine G.V. Bondar, Corresponding Member of the National Academy of Sciences of Ukraine Yu.V. Dumansky, Professor O.Yu. Popovych. - Kiev: VSV "Medicine", 2014 – 542 p.
6. Fedych T.G., Slipenky R.R. TNM classification, 7th edition. - Lviv, 2017 – 168 p.
7. Oncology. Textbook - 3rd edition, processed. and add. /B.T. Bilyinsky, N.A.Volodko, A.I.Gnatyshak, A.O.Galyachuk and others; For ed., B.T. Bilyinsky - K. Zdorovaya, 2007 – 52 p.
8. Dermatoconology. Atlas. Molochkova Yu.V., Molochkov A.Z. Publisher: Bmnom, 2015.
9. Lamotkin I.A. Oncodermatology. Atlas. – 87p. - 2017.

#### **8. Information resources:**

- [www.medlit.pp.ua](http://www.medlit.pp.ua)
- [www.intranet.tdmu.edu.ua](http://www.intranet.tdmu.edu.ua)