


**PRIVATE HIGHER EDUCATIONAL INSTITUTION  
"INTERNATIONAL ACADEMY OF ECOLOGY AND MEDICINE"**

**I approve**  
Acting rector  
Higher Education Institution "International Academy  
of Ecology and Medicine »  
Ph.D. Serhii HRIDCHIN  
16 " березня 2021



**EDUCATIONAL PROFESSIONAL PROGRAM**

**(NEW EDITION)**

The second (master's) level

Master

**FIELD OF KNOWLEDGE 22 "Health care"**

**SPECIALTY 221 "Dentistry"**

**PROFESSIONAL QUALIFICATION Dentist**

new edition  
(with changes and additions to the EPP from 12/27/2019)  
considered and approved by the Academic Council of the Higher Education Institution  
"International Academy of Ecology and Medicine"

Protocol from « 16 » 03 2021 № 8

order of " 16 " 03 2021 № 15-09

**Kiev**

## PREFACE

The educational and professional program for the second (master's) level of higher education in the specialty 221 "Dentistry" in the field of knowledge 22 "Health" was developed by the working group of the Department of Dentistry of the International Academy of Ecology and Medicine consisting of:

**Kuts Pavlo Valeriyovych** - Head of the working group, Doctor of Medical Sciences, Professor, Professor of Dentistry, International Academy of Ecology and Medicine.

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Educational and professional program of the second (master's) level of training in the field of knowledge 22 "Health" in the specialty 221 "Dentistry" approved and put into effect by order of the Acting Rector from " 16 " березня 2021 № 15-09

## REVIEWERS:

1. Kostenko E.Y. - Doctor of Medical Sciences, Professor, Dean of the Faculty of Dentistry of Uzhhorod National University.
2. Stepanenko O.V. - Director of LLC "Interdisciplinary Dental Center. Yu.V. Opanasyuk ».
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**1. General characteristics of the educational-professional program in the specialty 221 "Dentistry" in the field of knowledge 22 "Health Care"**

<b>1.1. general information</b>	
<b>Level of higher education</b>	The second (master's) level
<b>Degree of higher education</b>	Master
<b>Field of knowledge</b>	22 «Health care»
<b>Specialty</b>	221 "Dentistry"
<b>Restrictions on forms of education</b>	Training is allowed only in full-time (full-time) form of education
<b>Educational qualification</b>	Master of Dentistry
<b>Professional qualification</b>	Dentist
<b>Qualification in the diploma</b>	Degree of higher education - master Specialty - 221 "Dentistry" Educational program - Educational-professional program of the second (master's) level of preparation of the Master in the field of knowledge 22 "Health care" on a specialty 221 "Dentistry" Professional qualification - dentist
<b>1.2. The purpose of the educational program</b>	
Formation of the ability to apply the acquired knowledge, skills, understanding of the essence of general, professional and practical training to solve typical tasks of a dentist in the field of health care in the relevant position, the scope of which is provided by certain lists of syndromes and symptoms of diseases, dental diseases, physiological conditions and somatic diseases that require special tactics of patient management, emergencies, laboratory and instrumental studies, medical and dental manipulations.	
<b>Description of the subject area</b>	<p><b><i>Object of activity:</i></b> preservation of health, in particular dental, prevention and treatment of human dental diseases.</p> <p><b><i>Learning objectives:</i></b> training of a specialist capable of solving complex problems and problems in the field of dentistry and health care or in the process of training,</p>

characterized by uncertainty of conditions and requirements and to perform the professional activity of a dentist. The main components of the educational process for EPP "Dentistry" are practical classes at the departments of the Academy, clinical dental bases during which it is possible to master modern preventive and therapeutic-diagnostic dental technologies. The combination of modern logistics of departments, clinical bases and professional methodological approach to teaching basic professional disciplines on the basis of evidence-based medicine allow for quality training of a qualified specialist in the specialty 221 "Dentistry" in the field of knowledge 22 "Health".

***Theoretical content of the subject area:*** knowledge of the humanities, basic (natural and social) and clinical sciences in public health, prevention, diagnosis and treatment of dental diseases at the individual, family and population levels, necessary for the professional activities of a dentist.

***Methods, techniques and technologies:*** anamnestic, clinical, laboratory, radiological and functional diagnostic methods in accordance with the protocols of medical care; technologies for diagnosis, treatment and prevention of dental diseases, management and organization of work in the field of health care. However, the graduate must effectively have professional knowledge and be able to carry out the diagnostic process, identify the main symptoms and syndromes, determine the preliminary diagnosis, make a differential diagnosis, under the supervision of a supervisor to formulate a final clinical diagnosis of dental diseases (list 2 of Annex 3, attached ), to know the principles of treatment and prevention of dental diseases, to carry out treatment of major dental diseases (according to list 2.1 of Annex 3, attached) by making an informed decision according to existing algorithms.

Tools and equipment (objects / subjects, devices and devices that the applicant learns to apply and use): Applicants for higher education (graduates) with a

	Master's degree in 221 "Dentistry" must use modern diagnostic, medical tools, objects and devices for professional activities.
<b>1.3. Ability of higher education applicants for employment and further education</b>	
<b>Suitability for employment</b>	<p>The specialist is prepared to work according to NACE DK 009: 2010:</p> <p>Section Q. Health and social care.</p> <p>Section 86. Health care.</p> <p>Group 86.2 Medicine and dental practice</p> <p>Class 86.23 Dental practice.</p> <p>After training in the internship, the residency specialist is assigned a qualification - a dentist who is able to perform the professional work specified in DK 003: 2010 and can hold the appropriate medical position:</p> <p>2222.2 Dentist</p> <p>After completing the internship (residency) and qualification - dentist, specialists can specialize and perform the relevant professional work of a dentist of a certain specialty, which is specified in the current National Classifier of Ukraine "Classifier of Professions", to hold a relevant medical position.</p>
<b>Academic rights of graduates</b>	For further professional training in the specialty, a dentist must enter postgraduate education programs (internship, residency), where training is carried out in educational programs of the dental profile. Continuation of education at the third (educational and scientific) level of higher education. Acquisition of additional qualifications in the system of postgraduate education.
<b>1.4. Teaching and assessment</b>	
<b>Teaching and learning</b>	Student-centered learning, problem-oriented learning and practical orientation of training courses, self-study with the use of textbooks and manuals on disciplines, teaching materials of distance learning, lectures and practical classes using interactive technologies, individual work with teachers, participation in research.

<b>Evaluation</b>	<p>Exams, tests, defense of the report on practice, passing of the Unified state qualifying examination from four components:</p> <ul style="list-style-type: none"> <li>- Integrated test exam "STEP" - Objective structured practical (clinical) exam, which tests the practical skills of the graduate;</li> <li>- International exam on the basics of medicine - Exam on English for professional purposes.</li> </ul> <p>Assessment of students' academic achievements is carried out on a national scale (excellent, good, satisfactory, unsatisfactory; enrolled, uncredited); 200-point scale and ECTS scale (A, B, C, D, E, FX, F).</p>
<b>1.5. List of graduate competencies</b>	
<b>Integral competence</b>	Ability to solve complex, specialized problems and practical problems in the field of health care or in the learning process, which involves the use of theories and methods of research, diagnosis, treatment and prevention, ensuring public health
<b>General competencies (Appendix 1)</b>	
ZK 1	Ability to abstract thinking, analysis and synthesis.
ZK 2	Knowledge and understanding of the subject area and understanding of professional activity.
ZK 3	Ability to apply knowledge in practice.
ZK 4	Ability to communicate in the state language both orally and in writing.
ZK 5	Ability to communicate in English.
ZK 6	Skills in the use of information and communication technologies.
ZK 7	Ability to search, process and analyze information from various sources.
ZK 8	Ability to adapt and act in a new situation ..
ZK 9	Ability to identify, pose and solve problems.
ZK 10	The ability to be critical and self-critical.
ZK 11	Ability to work in a team.
ZK 12	The desire to preserve the environment.
ZK 13	Ability to act socially, responsibly and consciously.
ZK 14	The ability to exercise their rights and responsibilities as a member of society, to realize the values of civil

	(free democratic) society and the need for its sustainable development, the rule of law, human and civil rights and freedoms in Ukraine.
ZK 15	Ability to preserve and multiply moral, cultural, scientific values and achievements of society based on understanding the history and patterns of development of the subject area, its place in the general system of knowledge about nature and society and in the development of society, technology and technology, use different types and forms of physical activity active recreation and a healthy lifestyle.
<b>Professional competencies(Appendix 1)</b>	
FC1	Ability to collect medical information about the patient and analyze clinical data.
FC2	Ability to interpret the results of laboratory and instrumental research.
FC3	Ability to diagnose: determine the preliminary, clinical, final, concomitant diagnosis, emergencies.
FC4	Ability to plan and implement measures for the prevention of diseases of organs and tissues of the oral cavity and maxillofacial region.
FC5	Ability to design the process of providing medical care: to determine the approaches, plan, types and principles of treatment of diseases of organs and tissues of the oral cavity and maxillofacial region.
FC6	Ability to determine the rational mode of work, rest, diet in patients in the treatment of diseases of organs and tissues of the oral cavity and maxillofacial region.
FC7	Ability to determine the tactics of management of patients with diseases of organs and tissues of the oral cavity and maxillofacial region with concomitant somatic diseases.
FC8	Ability to perform medical and dental manipulations.
FC9	Ability to treat major diseases of organs and tissues of the oral cavity and maxillofacial region.
FC10	Ability to organize and conduct medical evacuation activities among the population.
FC11	Ability to determine tactics, methods and provide

	emergency medical care.
FC12	Ability to organize and conduct screening examinations in dentistry.
FC13	Ability to assess the impact of the environment on the health of the population (individual, family, population).
FC14	Ability to maintain regulatory medical records.
FC15	Ability to process state, social and medical information.
FC16	Ability to organize and conduct rehabilitation activities and care for patients with diseases of the oral cavity and maxillofacial region
FC17	Ability to provide legal support for one's own professional activity
FC18	Ability to provide home care according to the protocols of tactical medicine
<b>1.6. Program learning outcomes(Appendices 2.3)</b>	
PRN 1	Identify and identify the leading clinical symptoms and syndromes (according to list 1); according to standard methods, using preliminary data of the patient's anamnesis, data of the patient's examination, knowledge about the person, his organs and systems, to establish a probable nosological or syndromic preliminary clinical diagnosis of a dental disease (according to list 2).
PRN 2	Collect information about the general condition of the patient, assess the psychomotor and physical development of the patient, the condition of the organs of the maxillofacial area, based on the results of laboratory and instrumental studies to assess information about the diagnosis (list 5).
PRN 3	Assign and analyze additional (mandatory and optional) examination methods (laboratory, radiological, functional and / or instrumental) according to list 5, patients with diseases of organs and tissues of the oral cavity and maxillofacial region for differential diagnosis of diseases (according to the



	list) 2).
PRN 4	Determine the final clinical diagnosis in accordance with the relevant ethical and legal norms, by making an informed decision and logical analysis of subjective and objective data of clinical, additional examination, differential diagnosis under the supervision of a physician-manager in a medical institution (list 2.1).
PRN 5	Diagnose emergencies under any circumstances (at home, on the street, in a medical facility), in an emergency, martial law, lack of information and limited time (according to list 4).
PRN 6	Plan and implement measures to prevent dental diseases among the population to prevent the spread of dental diseases.
PRN 7	Analyze the epidemiological situation and carry out measures of mass and individual, general and local drug and non-drug prevention of dental diseases.
PRN 8	Determine the approach, plan, type and principle of treatment of dental disease (according to list 2) by making an informed decision according to existing algorithms and standard schemes.
PRN 9	Determine the nature of work, rest and the necessary diet in the treatment of dental diseases (according to list 2) on the basis of preliminary or final clinical diagnosis by making an informed decision according to existing algorithms and standard schemes.
PRN 10	To determine the tactics of managing a dental patient with somatic pathology (according to list 3) by making an informed decision according to existing algorithms and standard schemes.
PRN 11	Carry out treatment of major dental diseases according to existing algorithms and standard schemes under the supervision of a doctor-manager in a medical institution (according to list 2.1).
PRN 12	Organize medical and evacuation measures among the population, servicemen, in emergency situations, including martial law, during the detailed stages of medical evacuation, taking into account the existing system of medical and evacuation support.

PRN 13	Determine the tactics of emergency medical care, using the recommended algorithms, under any circumstances on the basis of a diagnosis of emergency in a limited time (according to list 4).
PRN 14	Analyze and evaluate state, social and medical information using standard approaches and computer information technologies.
PRN 15	Assess the impact of the environment on the health of the population in a medical institution by standard methods.
PRN 16	Form goals and determine the structure of personal activity based on the result of the analysis of certain social and personal needs.
PRN 17	Adhere to a healthy lifestyle, use the techniques of self-regulation and self-control.
PRN 18	To be aware of and guided in their activities by civil rights, freedoms and responsibilities, to raise the general cultural level.
PRN 19	Adhere to the requirements of ethics, bioethics and deontology in their professional activities.
PRN 20	Organize the necessary level of individual safety (personal and carers) in case of typical dangerous situations in the individual field of activity.
PRN 21	Perform medical manipulations on the basis of preliminary and / or final clinical diagnosis (according to lists 2, 2.1) for different segments of the population and in different conditions (according to list 6).
PRN 22	Perform medical dental manipulations on the basis of preliminary and / or final clinical diagnosis (according to lists 2, 2.1) for different segments of the population and in different conditions (according to list 7).
PRN 23	Perform manipulations of emergency medical care, using standard schemes, under any circumstances on the basis of a diagnosis of emergency (according to list 4) in a limited time (according to lists 6, 7).
<b>1.7. Academic mobility</b>	
<b>National credit mobility</b>	Opportunity for participants in the educational process to study, teach, train or conduct research in another

	institution of higher education (scientific institution) in Ukraine, to participate in various educational or training and research programs.
<b>International credit mobility</b>	Opportunity for participants in the educational process to study, teach, train or conduct research in another institution of higher education outside of Ukraine; the possibility of re-crediting loans received on the basis of the European Credit Transfer System (ECTS), in particular by comparing the content of educational programs.
<b>Training of foreign applicants for higher education</b>	The educational program provides training of foreign students in Ukrainian or English. Foreign graduates enrolled in this program are not involved in the end-to-end training program for reserve officers in the field of knowledge "Health", but instead master and improve their knowledge of the Ukrainian language. Admission to study of foreign citizens or stateless persons is carried out in accordance with the "Rules of admission to the International Academy of Ecology and Medicine" on the basis of learning outcomes.

## **II. REQUIREMENTS FOR THE PRELIMINARY LEVEL OF EDUCATION OF APPLICANTS**

A person has the right to obtain a master's degree in 221 "Dentistry" on the basis of complete general secondary education, subject to successful completion of an external independent evaluation of the quality of education. A person has the right to obtain a master's degree in 221 "Dentistry" on the basis of the educational qualification level of a junior specialist, obtained in the specialty 5.12010104 "Dentistry", 5.12010106 "Orthopedic Dentistry" or a professional junior bachelor, subject to successful entrance examinations.

## **III. SCOPE OF THE PROGRAM BY REGULATORY AND SELECTIVE PARTS**

The volume of the educational-professional program is 300 ECTS credits. The normative part of the program is 225 ECTS credits (75%). The sample size is 75 ECTS credits (25%), which meets the requirements of paragraph 15 of Article 62 of the Law of Ukraine "On Higher Education".

At least 75% of the educational program should be aimed at the formation of general and special (professional) competencies in the specialty, defined by the standard of higher education.

### 3.1. The volume of educational and professional program by type of educational activity

№	Type of educational activity	Amount, ECTS credits	Amount, hours
<b>I</b>	<b>NORMATIVE PART</b>	<b>300</b>	<b>9000</b>
<b>General training</b>			
1	Foreign Language	3	90
2	Ukrainian language (for professional purposes)	3	90
3	History of Ukraine and Ukrainian culture	3	90
4	Philosophy	2	60
5	Foreign language (for professional purposes)	3	90
6	Latin language and medical terminology	3	90
7	Medical biology	5	150
8	Medical and biological physics	3	90
9	Medical chemistry	3	90
10	Biological and bioorganic chemistry	6	180
11	Human anatomy	8	240
12	Histology, cytology and embryology	7	210
13	Physiology	5.5	165
14	Microbiology, virology and immunology	4.5	135
	<b>Total</b>	<b>59</b>	<b>1770</b>
<b>Professional training</b>			
15	Life safety, basics of bioethics and biosafety	2	60
16	Pathomorphology	6	180
17	Pathophysiology	6	180
18	Pharmacology	6	180
19	Propaedeutics of therapeutic dentistry	4	120
20	Propaedeutics of orthopedic dentistry	4	120
21	Propaedeutics of pediatric therapeutic dentistry	3	90
22	Internal medicine (including infectious diseases, epidemiology, clinical pharmacology)	6	180
23	Surgery (including oncology, neurosurgery)	6	180
24	Forensic medicine (dentistry). Medical law knowledge.	3	90
25	Prevention of dental diseases	3	90
26	Therapeutic dentistry	21	630
27	Surgical dentistry	19	570

28	Orthopedic dentistry (including implantology)	19	570
29	Orthodontics	10	300
30	Pediatric therapeutic dentistry	10	300
31	Pediatric surgical dentistry	6	180
32	Emergency and urgent medical care	3	90
33	General medical training (ophthalmology, otorhinolaryngology, neurology, including neurostomatology, dermatology, venereology, endocrinology, psychiatry, narcology, medical psychology, physical rehabilitation, sports medicine)	8	240
34	Internship	21	630
	<b>Total</b>	<b>166</b>	<b>4980</b>
<b>II</b>	<b>VARIATIVE PART</b>		
35	Elective disciplines	75	2250
<b>TOTAL HOURS FOR THE PROGRAM</b>		<b>300</b>	<b>9000</b>

### 3.2. Structural and logical scheme of the educational and professional program:

The list and names of disciplines of the curriculum are developed taking into account the acquisition by applicants of higher education of integrated, general and professional competencies in accordance with the Standard of higher education for training second (master's) level of higher education specialty 221 "Dentistry". The curriculum covers two stages of undergraduate training: preclinical and clinical. The structure of the curriculum is subject-integrated and focused on the logical sequence of teaching disciplines that make up the relevant cycles of training: general and vocational training (Appendix 4).

Educational and professional program 221 "Dentistry" is a systemic educational structure in which interdisciplinary links are established both at the theoretical and practical levels. Each specific discipline has a theoretical basis and is focused on its mandatory practical application. All disciplines of the program are conceptually and methodologically interconnected, exist in a single system of holistic education, teaching students of the second (master's) level of higher education in the specialty 221 "Dentistry".

Training is carried out only on a full-time (full-time) basis. Training period - 5 years.

Year of study	Types of educational activities
<b>1st year</b> (60 ECTS credits)	Regulatory disciplines (49 ECTS credits) Elective courses (11 ECTS credits)
<b>2nd year</b> (60 ECTS credits)	Regulatory disciplines (48 ECTS credits) Elective courses (12 ECTS credits)

<b>3rd year</b> (60 ECTS credits)	Regulatory disciplines (45 ECTS credits) Elective courses (13 ECTS credits)
<b>4th year</b> (60 ECTS credits)	Regulatory disciplines (46 ECTS credits) Elective courses (14 ECTS credits)
<b>5th year</b> (60 ECTS credits)	Regulatory disciplines (35 ECTS credits) Elective courses (25 ECTS credits)

### 3.3. The sequence of educational activities of the applicant by years:

	Name of disciplines according to the curriculum	Distribution by courses				
	<b>1. Normative academic disciplines</b>	<b>AN D</b>	<b>II</b>	<b>III</b>	<b>IV</b>	<b>V</b>
	<b>General training</b>					
1	Foreign Language	*				
2	Ukrainian language (for professional purposes)	*				
3	History of Ukraine and Ukrainian culture	*				
4	Philosophy	*				
5	Foreign language (for professional purposes)	*				
6	Latin language and medical terminology	*				
7	Medical biology	*				
8	Medical and biological physics	*				
9	Medical chemistry	*				
10	Biological and bioorganic chemistry	*	*			
11	Human anatomy	*				
12	Histology, cytology and embryology	*				
13	Physiology		*			
14	Microbiology, virology and immunology		*			
15	Life Safety; basics of bioethics and biosafety	*				
16	Pathomorphology		*	*		
17	Pathophysiology		*	*		
18	Pharmacology		*	*		
19	Propaedeutics of therapeutic dentistry		*			
20	Propaedeutics of orthopedic dentistry		*			
21	Propaedeutics of pediatric therapeutic dentistry		*			
22	Internal medicine (including infectious diseases, epidemiology, clinical pharmacology)			*	*	
23	Surgery (including oncology, neurosurgery)			*	*	
24	Forensic medicine (dentistry). Medical jurisprudence			*		
25	Prevention of dental diseases			*		
26	Therapeutic dentistry			*	*	*
27	Surgical dentistry			*	*	*
28	Orthopedic dentistry (including implantology)			*	*	*
29	Orthodontics			*	*	*

30	Pediatric therapeutic dentistry				*	*
31	Pediatric surgical dentistry				*	*
32	General medical training (ophthalmology, otorhinolaryngology, neurology, including neurostomatology, dermatology, venereology, endocrinology, psychiatry, narcology, medical psychology, physical rehabilitation, sports medicine)				*	
33	Emergency and urgent medical care					*
34	Internship		*	*	*	*
35	Elective disciplines	*	*	*	*	*
	Certification			*		*

### 3.4. The list of components of the educational-professional program and their logical sequence

Code n / a	Components of the educational program (academic disciplines)	Number of loans	Result form. control
<b>I. General training</b>			
OK.01	Foreign Language	3	D / Z
OK.02	Ukrainian language (for professional purposes)	3	D / Z
OK.03	History of Ukraine and Ukrainian culture	3	WITH
OK.04	Philosophy	2	D / Z
OK.05	Foreign language (for professional purposes)	3	D / Z
OK.06	Latin language and medical terminology	3	D / Z
OK.07	Medical biology	5	D / Z, Exam
OK.08	Medical and biological physics	3	D / Z
OK.09	Medical chemistry	3	D / Z
OK.10	Biological and bioorganic chemistry	6	D / Z, Exam
OK.11	Human anatomy	8	D / Z, Exam
OK.12	Histology, cytology and embryology	7	D / Z, Exam
OK.13	Physiology	5.5	D / Z, Exam
OK.14	Microbiology, virology and immunology	4.5	D / Z, Exam
	<b>Total:</b>	<b>59</b>	
<b>II. Professional and practical training</b>			
OK.15	Life safety, basics of bioethics and biosafety	2	Test

OK.16	Pathomorphology	6	D / Z, Exam
OK.17	Pathophysiology	6	D / Z, Exam
OK.18	Pharmacology	6	D / Z, Exam
OK.19	Propaedeutics of therapeutic dentistry	4	D / Z
OK.20	Propaedeutics of orthopedic dentistry	4	D / Z
OK.21	Propaedeutics of pediatric therapeutic dentistry	3	D / Z
OK.22	Internal medicine (including infectious diseases, epidemiology, clinical pharmacology)	6	D / Z
OK.23	Surgery (including oncology, neurosurgery)	6	D / Z
OK.24	Forensic medicine (dentistry). Medical jurisprudence.	3	Test
OK.25	Prevention of dental diseases	3	D / Z
OK.26	Therapeutic dentistry	21	D / Z, A
OK.27	Surgical dentistry	19	D / Z, A
OK.28	Orthopedic dentistry	19	D / Z, A
OK.29	Orthodontics	10	D / Z
OK.30	Pediatric therapeutic dentistry	10	D / Z, A
OK.31	Pediatric surgical dentistry	6	D / Z, A
OK.32	Emergency and urgent medical care	3	D / Z
OK.33	General medical training (ophthalmology, otorhinolaryngology, neurology, including neurostomatology, dermatology, venereology, endocrinology, psychiatry, narcology, medical psychology, physical rehabilitation, sports medicine)	8	D / Z
OK.34	Industrial practice: patient care / nursing	6	D / Z
	Industrial medical practice	4	D / Z
	Industrial dental practice	11	D / Z
		<b>21</b>	
	<b>Total:</b>	<b>166</b>	
<b>The total amount of mandatory components:</b>		<b>225</b>	
	<b>VARIATIVE PART</b>		
WB.	Elective disciplines	<b>75</b>	Test
	<b>Certification</b>		
	<b>TOTAL HOURS FOR THE PROGRAM</b>	<b>300</b>	



The list of elective courses offered to students is updated and changed annually based on the proposals of teachers, graduates, taking into account previous developments, best practices and in-depth specialization.

### List of elective courses

<b>№ p / p</b>	<b>Selective components of the educational program</b>	<b>Number of loans</b>	<b>Form of final control</b>
	<b>1 course</b>		
1	Fundamentals of pedagogy, basics of psychology.	3	test
2	Fundamentals of economic theories	2	test
3	History of medicine	2	test
4	Medical and biological physics in the professional field	2	test
5	Human anatomy, features of blood supply and innervation of the head and neck	2	test
6	Psychology of communication	3	test
7	European standards of computer literacy	3	test
8	Modern problems of molecular biology	3	test
9	Sociology and medical sociology	2	test
10	science of law	3	test
11	Business English.	3	test
12	Religious studies	2	test
	<b>2nd course</b>		test
1	Medical informatics. Information technology in dentistry.	2	test
2	Clinical anatomy and operative surgery	3	test
3	Deontology in medicine	2	test
4	Hygiene in dentistry and human ecology.	2	test
5	Propaedeutics of internal medicine.	2	test
6	Business English.	3	test
7	World civilization	2	test
8	Fundamentals of patent science	2	test
9	Basic technologies for making dentures	2	test
10	Cosmetology	3	test
	<b>3rd course</b>		test
1	Modern methods of genetic diagnosis	3	test
2	Social medicine, public health and basics of evidence-based medicine.	2	test
3	Radiology. Modern methods of radiology in dentistry	3	test
4	Business English.	3	test
5	Fundamentals of Christian ethics and morality	2	test

6	Fundamentals of gerontology and geriatrics	2	test
7	Fundamentals of homeopathy	2	test
8	Improving knowledge of human anatomy, medical biology, histology, cytology and embryology, biological and bioorganic chemistry in preparation for EDC certification.	2	test
9	Improving knowledge of physiology, pathomorphology, pathophysiology, pharmacology, microbiology, virology and immunology in preparation for EDC	2	test
10	Modern diagnosis of diseases of the temporomandibular joint and salivary glands.	2	test
11	Modern methods of prevention and treatment of dental diseases.	2	test
	<b>4th course</b>		
1	Tuberculosis. Current problems of pulmonology	2	test
2	Obstetrics and gynecology.	2	test
3	Pediatrics with pediatric infections.	2	test
4	Basics of alcoholism and drug addiction prevention	2	test
5	Fundamentals of psychoanalysis	3	test
6	Medical subculture	3	test
7	Public health, economics and health care organization.	2	test
8	Business English.	3	test
9	Methodology of evidence-based medicine	3	test
10	Biostatistics and clinical epidemiology	3	test
11	Fundamentals of sexology and sexopathology	3	test
12	Current problems of HIV infection	3	test
13	Modern diagnostics of diseases of the TMJ and salivary glands	2	test
14	Instrumental methods of functional diagnostics of dental diseases.	2	test
	<b>5th course</b>		
1	Management and marketing in dentistry	3	test
2	Extreme medicine	2	test
3	Plastic and reconstructive surgery	3	test
4	Reflexology in dentistry	2	test
5	Modern technologies of solid prosthetics	3	test
6	Fundamentals of aesthetic tooth restoration	2	test
7	Surgical preparation of the oral cavity for prosthetics	2	test
8	Endodontic technique in pediatric dentistry	2	test
9	Modern technologies for the use of fixed	3	test

	orthodontic appliances		
10	Fundamentals of immunoprophylaxis	3	test
11	Improvement of knowledge, practical skills in clinical medicine as preparation for EDKI certification.	5	test

**Selective components**  
**specialty 221 "Dentistry" (WB)**

*Selective unit 1*

1. Fundamentals of pedagogy, basics of psychology.
2. Fundamentals of economic theories.
3. Theory and practice of professional language communication.
4. European standards of computer literacy.
5. Jurisprudence.
6. Psychology of communication.
7. Business English.
8. Religious studies
9. Jurisprudence.
10. Foreign language (second).
11. Fundamentals of Christian ethics and morality.
12. World civilization.
13. Fundamentals of patent science.
14. Fundamentals of psychoanalysis.
15. Actual problems of HIV infection.
16. Basics of prevention of alcoholism and drug addiction.

*Selective unit 2*

1. History of medicine.
2. Medical and biological physics in the professional field.
3. Human anatomy, features of blood supply and innervation of the head and neck.
4. Modern problems of molecular biology.
5. Medical informatics. Information technology in dentistry.
6. Clinical anatomy and operative surgery.
7. Deontology in medicine.
8. Hygiene in dentistry and human ecology.
9. Cosmetology.
10. Modern methods of genetic diagnosis.
11. Social medicine, public health and basics of evidence-based medicine.

12. Fundamentals of gerontology and geriatrics.
13. Fundamentals of homeopathy.
14. Improving knowledge of human anatomy, medical biology, histology, cytology and embryology, biological and bioorganic chemistry in preparation for EDC certification.
15. Improving knowledge of physiology, pathomorphology, pathophysiology, pharmacology, microbiology, virology and immunology in preparation for OSQE.
16. Medical subculture.

### ***Selective unit 3***

1. Phthisiology. Current problems of pulmonology.
2. Obstetrics and gynecology.
3. Pediatrics with pediatric infections.
4. Public health, economics and health care organization.
5. Methodology of evidence-based medicine.
6. Biostatistics and clinical epidemiology.
7. Foundations sexology and sexopathology.
8. Extreme medicine.
9. Basics of immunoprophylaxis.

### ***Selective unit 4***

1. Modern diagnosis of diseases of the TMJ and salivary glands.
2. Plastic and reconstructive surgery.
3. Management and marketing in dentistry.
4. Plastic and reconstructive surgery.
5. Instrumental methods of functional diagnosis of dental diseases.
6. Plastic and reconstructive surgery.
7. Reflexology in dentistry.
8. Modern technologies of solid prosthetics.
9. Fundamentals of aesthetic tooth restoration.
10. Surgical preparation of the oral cavity for prosthetics.
11. Endodontic technique in pediatric dentistry.
12. Modern technologies for the use of fixed orthodontic appliances.
13. Improving knowledge, practical skills in clinical medicine as a preparation for the certification of OSQE.

#### IV. FORMS OF CERTIFICATION OF HIGHER EDUCATION APPLICANTS

<b>Forms of certification of applicants for higher education</b>	Certification according to the educational-professional training program in the specialty "Dentistry" is carried out in the form of a single state qualifying exam
<b>Requirements for the unified state qualification exam</b>	<p>The Unified State Qualification Exam is conducted in accordance with the "Regulations on the Procedure for Conducting the Unified State Qualification Examination (OSQE) for Applicants of the Second (Master's) Level of Higher Education" at the International Academy of Ecology and Medicine and consists of the following components:</p> <ul style="list-style-type: none"><li>• licensed integrated exam, consisting of 2 test exams "Step 1" and "Step 2". "Step 1" covers the content of fundamental disciplines and is formed after the full implementation of the curriculum of the 3rd year of study. "Step 2" covers the content of clinical disciplines and is formed after the full implementation of the curriculum for training in the specialty "Dentistry" integrated test exam "KROK", which assesses the quality of training to higher education standards and is conducted by the Testing Center at the Ministry of Health of Ukraine;</li><li>• a professional English exam, which assesses the student's competence in professional English and is conducted by the Testing Center at the Ministry of Health of Ukraine;</li><li>• objective structured practical (clinical) exam (OSP (K) I), which assesses the readiness of the graduate to pursue professional activities in accordance with the requirements of the standard of higher education by demonstrating practical (clinical) components of professional competence on a real object or model and conducted examination commission of a higher education institution</li></ul>

## **V. PROSPECTIVE DIRECTIONS OF EDUCATIONAL PROFESSIONAL PROGRAM DEVELOPMENT**

In today's world, the development of medical science requires doctors to continuous training, self-improvement, the ability to analyze an increasing amount of knowledge and apply it in their medical practice. Medical education should provide high-quality training for higher education and become an important component of health care reform and implementation of social priorities of the state, as the quality of medical care depends on the level of training of future dentists.

Reforming the health care system creates new requirements in the formation of a new type of specialists who must not only master the specialty, but also have the skills of communication, business communication, be able to adapt to new changes, understand insurance, economics and law.

Modern development of medical science and practice necessitates adjustments in the training and retraining of medical workers with the approximation of their education to international standards. In this direction, it is important to introduce into the curriculum the study of English in a professional field. Also, one of the prospects of the educational program is to improve practical training in the system of clinical dental bases with a guarantee of compliance with demand in the labor market and the implementation of knowledge in new promising areas of work in the specialty.

The experience of developed countries in Europe and the United States confirms that the combination of educational, scientific and medical-diagnostic processes in one institution leads to an indisputable improvement in the performance of all components of such an institution. A modern dentist should not only gain knowledge, but should learn to work with new equipment, get acquainted with the latest scientific and clinical advances in dentistry. Prospects for the development of educational and professional program for the next 5 years will be:

- coordination of educational, scientific and medical-diagnostic processes;
- study of English in a professional field, which will meet the highest criteria for training a dentist in Ukraine;
- introduction into the educational process of modern practices, scientific achievements in the field of dentistry;
- extensive use of the latest educational technologies and modern software;
- strengthening the content and technological content of educational disciplines of professional training, which takes into account the formation of professional competencies of specialists;

- constant communication with employers and providing opportunities for internships in modern dental clinics;
- creating real conditions for practical training.

## **VI. REQUIREMENTS FOR THE INTERNAL QUALITY ASSURANCE SYSTEM OF HIGHER EDUCATION**

The International Academy of Ecology and Medicine has a system of providing higher education institutions with the quality of educational activities and the quality of higher education (internal quality assurance system), which provides for the implementation of the following procedures and measures:

- improving the planning of educational activities: approval, monitoring and periodic review of educational programs;
- formation of methodical materials to ensure the educational process;
- introduction of innovative technologies and teaching methods;
- improving the quality of the contingent of applicants for higher education;
- strengthening the human resources of the Academy;
- ensuring the availability of the necessary resources for the organization of the educational process and support for higher education;
- use of information systems to improve the management of the educational process;
- ensuring publicity of information about the activities of the International Academy of Ecology and Medicine;
- creation of an effective system of prevention and detection of academic plagiarism in the scientific works of employees of higher education institutions and applicants for higher education;
- participation of the Academy in national and international rating researches of higher educational institutions.
  - free creative learning (formation of students' own learning trajectory, ensuring real selectivity of disciplines);
  - rating system of knowledge assessment;
- international integration and integration of the higher education system of the Academy into the European Higher Education Area while preserving and developing the achievements and progressive traditions developed in the educational institution;
- continuity of the process of obtaining higher education;
- support of educational, scientific and innovative activities at the Academy;
- openness of the formation of the structure and scope of educational and professional training of specialists with higher medical education.
- ensuring the quality of research and teaching staff Academy;

- providing internal communication, feedback and access to all important information about Academy for the academic community ;
- communication with stakeholders: employers, parents, public authorities, secondary and higher education institutions, public organizations and various domestic and foreign partners.

## **VII. PARTICIPATION OF EMPLOYERS AND / OR PROFESSIONAL ASSOCIATIONS IN THE DEVELOPMENT OF THE EDUCATIONAL PROFESSIONAL PROGRAM.**

An important factor in improving the quality of education and reducing the gap between practical and theoretical training of future professionals is the close cooperation of the Private Higher Educational Institution "International Academy of Ecology and Medicine" with employers. The International Academy of Ecology and Medicine attracts employers at the stage of determining the purpose of the program and learning outcomes, taking into account modern medical and technical technologies for further improvement of the technological content of the educational program. Such cooperation promotes:

- intensive acquaintance of higher education seekers with aspects of future medical activity;
- the formation of a meaningful attitude to the disciplines being studied, to the basics of professional activity;
- formation of respect for the profession.

Elements of achieving the goals and objectives of the educational and professional program are the conclusion of agreements on cooperation with dental clinics for students to undergo various types of internships, participation in scientific and practical conferences and more.

In addition, employers are involved in the organization and conduct of the educational process (giving lectures, conducting practical classes, trainings, workshops, on-line and field interviews with applicants for higher education for further employment). Employers review educational programs of specialties in terms of professional training, but do not interfere in the procedures of the educational process and the academic component of the formation of learning outcomes in the normative disciplines of general training in higher education.

## **VIII. PROFESSIONAL STANDARDS.**



International normative documents and standards in force in accordance with the legislation of Ukraine governing the professional activities and training of dentists:

1. European Directive 2005/36 / EC on the recognition of professional qualifications (Directive 2005/36 / EC OF the European Parliament and of the Council of 7 September 2005 on the recognition of professional qualifications)
2. Directive 2013/55 / EU of the European Parliament and of the Council of 20 November 2013.
3. Trilogy of global quality standards of the World Federation of Medical Education (WFME Global Standards for Quality Improvement: Basic Medical Education, WFME Global Standards for Quality Improvement: Postgraduate Medical Education and WFME Global Standards for Quality Improvement: Continuous Professional Development) and Education Standards for PhD in the field of biomedicine and health sciences (Standards for PhD Education in Biomedicine and Health Sciences in Europe)
4. Code of Physicians of Ukraine (Adopted and signed by the All-Ukrainian Congress of Medical Organizations and the X Congress of the All-Ukrainian Medical Society (VULT) in Evpatoria on September 27, 2009) (<http://www.uapravo.net/akty/postanowy-basic/akt5dprf9d.htm>).

## **XI. LIST OF REGULATORY DOCUMENTS**

1. Law of Ukraine "On Higher Education" 07/01/2014 561556-VII.
2. Law of Ukraine on licensing of economic activities. 02.03.2015 № 222- VIII.
3. Resolution of the Cabinet of Ministers of 29.04.2015 № 266 "On approval of the list of branches of knowledge and specialties for which higher education students are trained.
4. Resolution of the Cabinet of Ministers of 30.12.2015 №1187 "On approval of the License conditions for educational activities of educational institutions".
5. Order of the Ministry of Education and Science of Ukraine dated 19.02.2015 №166 "Some issues of disclosure of information about the activities of higher education institutions".
6. Order of the Ministry of Education and Science of Ukraine dated 06.11.2015 №1151 "On the peculiarities of the introduction of the list of branches of knowledge for which training of higher education, approved by the Cabinet of Ministers of Ukraine dated April 29, 2015 № 266"
7. National Classifier of Ukraine: "Classifier of Professions" DK 003: 2010 // Publishing House "Sotsinform". - K .: 2010.

8. Order of the Ministry of Economic Development and Trade of Ukraine of November 18, 2014 № 1361 “On approval of the amendment to the national classifier of Ukraine DK 003: 2010” (amendment № 2).
9. National Classifier of Ukraine. Classification of types of economic activity DK 009: 2010. Valid from 01.01.2012. With changes and additions made by the order of the State Committee of Ukraine for Technical Regulation and Consumer Policy dated November 29, 2010 № 530.
10. Order of the Ministry of Health of Ukraine dated 28.10.2012. №385 "List of medical positions in health care facilities".

**Guarantor**  
**educational and professional program**  
**doctor of medical sciences, professor**

**Kuts P.V.**

# Appendix 1

**Matrix of correspondence of the defined competencies to NCR descriptors.**

№	Classification of competencies	Knowledge	Skills	Communication	Autonomy and responsibility
		<b>Zn1.</b> Specialized conceptual knowledge acquired in the process of learning and / or professional activity at the level of the latest achievements, which are the basis for original thinking and innovation, in particular in the context of research work. <b>Zn2.</b> Critical understanding of problems in teaching and / or professional activities and at the border of subject areas	<b>Um1</b> Solving complex problems and issues that require updating and integrating knowledge, often in conditions of incomplete / insufficient information and conflicting requirements <b>Um2</b> Conducting research and / or innovation activities.	<b>K1</b> WITH clear and unambiguous communication of one's own conclusions, as well as the knowledge and explanations that substantiate them, to specialists and non-specialists, in particular to students <b>K2</b> INuse of foreign languages in professional activities	<b>AB1</b> Making decisions in difficult and unpredictable conditions, which requires the application of new approaches and forecasting <b>AB2</b> Responsibility for the development of professional knowledge and practices, assessment of strategic team development <b>AB3</b> Ability to further study, which is largely autonomous and independent
General competencies					
1.	Ability to abstract thinking, analysis and synthesis.	<b>Zn1</b> <b>Zn2</b>	<b>Um1</b>		<b>AB1</b>
2	Knowledge and understanding of the subject area and understanding of professional activity.	<b>Zn1</b>	<b>Um1</b>	<b>K1</b>	<b>AB2</b>
3.	Ability to apply knowledge in practice.	<b>Zn1</b>	<b>Um1</b>	<b>K1</b>	<b>AB1</b>
4	Ability to communicate in the state language both orally and in writing.			<b>K1, K2</b>	
5.	Ability to communicate in English.			<b>K1</b>	

6	Skills in the use of information and communication technologies.	<b>Zn1</b>	<b>K1, K2</b>	<b>AB2</b>	<b>K1, K2</b>	<b>AB2</b>
7	Ability to search, process and analyze information from various sources.	<b>Zn1</b>			<b>K1</b>	<b>AB2</b>
8.	Ability to adapt and act in a new situation.		<b>Um1</b>			<b>AB1</b>
9	Ability to identify, pose and solve problems.	<b>Zn1</b>	<b>Um1</b>		<b>K1</b>	<b>AB1</b>
10	The ability to be critical and self-critical.	<b>Zn2</b>				<b>AB1</b>
11	Ability to work in a team.	<b>Zn2</b>			<b>K1, K2</b>	<b>AB2</b>
12	The desire to preserve the environment.	<b>Zn1</b>	<b>Um1</b>			<b>AB1</b>
thi rte en.	The ability to act socially responsibly and consciously.	<b>Zn1</b>				<b>AB1</b>
14	The ability to exercise their rights and responsibilities as a member of society, to realize the values of civil (free democratic) society and the need for its sustainable development, the rule of law, human and civil rights and freedoms in Ukraine.	<b>Zn1</b>	<b>Um1</b>		<b>K1</b>	<b>AB3</b>
15	Ability to preserve and multiply moral, cultural, scientific values and achievements of society based on understanding the history and patterns of development of the subject	<b>Zn1</b>	<b>Um2</b>			<b>AB3</b>

	area, its place in the general system of knowledge about nature and society and in the development of society, technology and technology, use different types and forms of physical activity active recreation and a healthy lifestyle.				
<b>Special (professional) competencies</b>					
1.	Ability to collect medical information about the patient and analyze clinical data	<b>Zn2</b>	<b>Um1</b>	<b>K1, K2</b>	
2.	Ability to interpret the results of laboratory and instrumental research	<b>Zn1</b>	<b>Um1</b>		<b>AB1</b>
3.	Ability to diagnose: determine the preliminary, clinical, final, concomitant diagnosis, emergencies	<b>Zn1</b>	<b>Um1</b>		<b>AB1</b>
4.	Ability to plan and implement measures for the prevention of diseases of organs and tissues of the oral cavity and maxillofacial region	<b>Zn2</b>	<b>Um1</b>	<b>K1</b>	<b>AB1</b>
5.	Ability to design the process of medical care: to determine the approaches, plan, types and principles of treatment of diseases of organs and tissues of the	<b>Zn1</b>	<b>Um1</b>		<b>AB1</b>

	oral cavity and maxillofacial region				
6.	Ability to determine the rational mode of work, rest, diet in patients in the treatment of diseases of organs and tissues of the oral cavity and maxillofacial region	<b>Zn1, Zn2</b>	<b>Um1</b>	<b>K1</b>	
7.	Ability to determine the tactics of management of patients with diseases of organs and tissues of the oral cavity and maxillofacial region with concomitant somatic diseases		<b>Um1</b>		<b>AB1, AB2</b>
8.	Ability to perform medical and dental manipulations	<b>Zn1</b>	<b>Um1</b>		<b>AB1</b>
9.	Ability to treat major diseases of organs and tissues of the oral cavity and maxillofacial region	<b>Zn1</b>	<b>Um1</b>	<b>K1</b>	<b>AB1 AB2</b>
10.	Ability to organize and conduct medical and evacuation measures	<b>Zn1, Zn2</b>	<b>Um1</b>	<b>K1</b>	<b>AB1 AB2</b>
11.	Ability to determine tactics, methods and provide emergency medical care	<b>Zn1, Zn2</b>	<b>Um1</b>		<b>AB1 AB2</b>
12.	Ability to organize and	<b>Zn1</b>		<b>K1</b>	<b>AB2</b>

	conduct screening examinations in dentistry		<b>Um2</b>		
13.	Ability to assess the impact of the environment on the health of the population (individual, family, population)	<b>Zn2</b>	<b>Um2</b>		
14.	Ability to maintain regulatory medical records			<b>K1</b>	<b>AB1</b>
15.	Processing of state, social and medical information	<b>Zn2</b>		<b>K1</b> <b>K2</b>	<b>AB1</b> <b>AB2</b>
16.	Ability to organize and conduct rehabilitation measures and care for patients with diseases of the oral cavity and maxillofacial region	<b>Zn1</b>	<b>Um1</b>	<b>K1</b>	
17.	Ability to provide legal support for one's own professional activity	<b>Zn1</b>		<b>K1</b>	<b>AB2</b>
18.	Ability to provide home care according to the protocols of tactical medicine	<b>Zn2</b>	<b>Um1</b>	<b>K1</b>	<b>AB1</b> <b>AB2</b>

Matrix of correspondence of learning outcomes to NRC descriptors.

№	Classification of competencies	<b>Knowledge</b> <b>Zn1.</b> Specialized conceptual knowledge acquired in the process of learning and / or professional activity at the level of the latest achievements, which are the basis for original thinking and innovation, in particular in the context of research work. <b>Zn2.</b> Critical understanding of problems in teaching and / or professional activities and at the border of subject areas	<b>Skills</b> <b>Um1</b> Solving complex problems and issues that require updating and integrating knowledge, often in conditions of incomplete / insufficient information and conflicting requirements <b>Um2</b> Conducting research and / or innovation activities.	<b>Communication</b> <b>K1</b> WITH clear and unambiguous communication of one's own conclusions, as well as the knowledge and explanations that substantiate them, to specialists and non-specialists, in particular to students <b>K2</b> IN use of foreign languages in professional activities	<b>Autonomy and responsibility</b> <b>AB1</b> Decision making in difficult and unpredictable conditions, which requires the application of new approaches and forecasting. <b>AB2</b> Responsibility for the development of professional knowledge and practices, assessment of strategic development of the team. <b>AB3</b> Ability to further study, which is largely autonomous and independent.
Program learning outcomes					
1.	Identify and identify the leading clinical symptoms and syndromes (according to list 1); according to standard methods, using preliminary data of the patient's anamnesis, data of the patient's examination, knowledge about the person, his organs and systems, to establish a	<b>Zn1</b>	<b>Um1</b>	<b>K1</b>	<b>AB1</b>



	probable nosological or syndromic preliminary clinical diagnosis of a dental disease (according to list 2)				
2	2. Collect information about the general condition of the patient, assess the psychomotor and physical development of the patient, the condition of the organs of the maxillofacial area, based on the results of laboratory and instrumental studies to assess information about the diagnosis (according to list 5)	<b>Zn1</b>	<b>Um1</b>	<b>K1, K2</b>	<b>AB1, AB2</b>
3.	Assign and analyze additional (mandatory and optional) examination methods (laboratory, X-ray, functional and / or instrumental) according to list 5, patients with diseases of organs and tissues of the oral cavity and maxillofacial region for differential diagnosis of diseases (according to the list) 2)	<b>Zn1</b>	<b>Um1</b>	<b>K1</b>	<b>AB1, AB2</b>
4	Determine the final clinical	<b>Zn1, Zn2</b>	<b>Um1</b>	<b>K1</b>	<b>AB1, AB2</b>

	diagnosis, adhering to the relevant ethical and legal norms, by making an informed decision and logical analysis of the obtained subjective and objective data of clinical, additional examination, differential diagnosis under the supervision of a doctor-manager in a medical institution (according to list 2.1)				
5	Establish a diagnosis of emergencies under any circumstances (at home, on the street, in a medical institution), in an emergency, martial law, information and time constraints (according to list 4)	<b>Zn1</b>	<b>Um1</b>	<b>K1</b>	<b>AB1, AB2</b>
6	Plan and implement measures to prevent dental diseases among the population to prevent the spread of dental diseases	<b>Zn1</b>	<b>Um1</b>	<b>K1</b>	<b>AB1</b>
7	Analyze the epidemiological situation and carry out measures of mass and individual, general and local drug and	<b>Zn1</b>	<b>Um1, Um2</b>	<b>K1</b>	<b>AB1</b>

	non-drug prevention of dental diseases				
8	Determine the approach, plan, type and principle of treatment of dental disease (according to list 2) by making an informed decision according to existing algorithms and standard schemes.	<b>Zn1</b>	<b>Um1</b>	<b>K1</b>	<b>AB1, AB2</b>
9	Determine the nature of the regime of work, rest and the necessary diet during the treatment of dental diseases (according to list 2) on the basis of preliminary or final clinical diagnosis by making an informed decision according to existing algorithms and standard schemes	<b>Zn1</b>	<b>Um1</b>	<b>K1</b>	<b>AB1</b>
10	To determine the tactics of the dental patient with somatic pathology (according to list 3) by making an informed decision according to existing algorithms and standard schemes	<b>Zn1</b>	<b>Um1</b>	<b>K1</b>	<b>AB1, AB2</b>
11	Carry out treatment of major dental diseases	<b>Zn1</b>	<b>Um1</b>	<b>K1</b>	<b>AB1, AB2</b>

	according to existing algorithms and standard schemes under the supervision of a doctor-manager in a medical institution (according to list 2.1)				
12	To organize carrying out of medical - evacuation actions among the population, military men, in the conditions of an emergency situation, including martial law, during the detailed stages of medical evacuation, taking into account the existing system of medical - evacuation support	<b>Zn1</b>	<b>Um1</b>	<b>K1</b>	<b>AB1</b>
thi rte en	Determine the tactics of emergency medical care, using the recommended algorithms, under any circumstances on the basis of the diagnosis of an emergency in a limited time (according to list 4)	<b>Zn1</b>	<b>Um1</b>	<b>K1</b>	<b>AB1, AB2</b>
14	Analyze and evaluate state, social and medical information using standard approaches and computer information technologies	<b>Zn1, Zn2</b>	<b>Um1, Um2</b>	<b>K1, K2</b>	<b>AB2</b>

15	Assess the impact of the environment on the health of the population in a medical institution by standard methods	<b>Zn1</b>	<b>Um1</b>	<b>K1</b>	<b>AB1</b>
16	Form goals and determine the structure of personal activity based on the result of the analysis of certain social and personal needs.	<b>Zn1</b>	<b>Um1</b>	<b>K1</b>	<b>AB1, AB2</b>
17	Adhere to a healthy lifestyle, use the techniques of self-regulation and self-control.	<b>Zn1</b>	<b>Um1</b>	<b>K1</b>	<b>AB1, AB2</b>
18	To be aware of and guided in their activities by civil rights, freedoms and responsibilities, to raise the general cultural level.	<b>Zn1</b>	<b>Um1</b>	<b>K1</b>	<b>AB1, AB2</b>
19	Adhere to the requirements of ethics, bioethics and deontology in their professional activities.	<b>Zn1</b>	<b>Um1</b>		<b>AB3</b>
20	Organize the necessary level of individual safety (personal and carers) in case of typical dangerous situations in the individual field of activity.	<b>Zn1</b>	<b>Um1</b>		<b>AB1</b>
21	Perform medical manipulations on the basis of preliminary and / or	<b>Zn1</b>	<b>Um1</b>	<b>K1</b>	<b>AB3</b>

	final clinical diagnosis (according to lists 2, 2.1) for different segments of the population and in different conditions (according to list 6).				
22	Perform medical dental manipulations on the basis of preliminary and / or final clinical diagnosis (according to lists 2, 2.1) for different segments of the population and in different conditions (according to list 7).	<b>Zn1</b>	<b>Um1</b>	<b>K1</b>	<b>AB1</b>
23	Perform manipulations of emergency medical care, using standard schemes, under any circumstances on the basis of a diagnosis of emergency (according to list 4) in a limited time (according to lists 6, 7).	<b>Zn1</b>	<b>Um1</b>		<b>AB1, AB2</b>

**List 1 (syndromes and symptoms)**

1. adentia
2. anemia
3. occlusion anomaly
4. facial asymmetry
5. atrophy
6. painful dysfunction of the TMJ
7. pain in the heart
8. toothache
9. abdominal pain
10. pain in the soft tissues of the maxillofacial area
11. pain in the bones of the face
12. loss of consciousness
13. loss of clinical attachment
14. hypermobility of the articular head of the TMJ
15. hemorrhagic syndrome
16. hyperesthesia
17. hypersalivation
18. headache
19. humming (open, closed)
20. deviation of the mandible destruction of bone tissue
21. defects of the crown of the tooth
22. deformation of the bones of the facial skeleton
23. deformation of the bite
24. discoloration of teeth
25. facial disproportion
26. jaundice
27. shortness of breath and asphyxia
28. inflammatory infiltrate of the tissues of the maxillofacial area
29. dizziness
30. discoloration of the skin, mucous membranes of the mouth
31. change the shape of the teeth
32. change in interalveolar height
33. elements of the lesion on the skin and mucous membranes of the oral cavity
34. convergence (divergence) of teeth
35. xerostomia
36. fever
37. lymphadenopathy
38. macroglossia
39. macrocheilia
40. maceration of the corners of the mouth
41. meningeal syndrome
42. edematous syndrome
43. dental deposits
44. fistula
45. restriction of mouth opening

46. paresis, paralysis of the nerves of the maxillofacial localization
47. heartburn
48. pathological abrasion of teeth
49. movement disorders of the lower jaw
50. taste disturbance
51. violation of the sensitivity of the tissues of the maxillofacial area
52. dysfunction of sucking, swallowing pathological mobility of teeth
53. tumors and tumor-like neoplasms in the maxillofacial area
54. gum recession
55. mobility of bone fragments of the facial skeleton
56. thinning of the cortical plate of the jaws
57. "devastation-filling"
58. partial and complete loss of teeth
59. fluctuation
60. chemosis
61. cyanosis (diffuse and local)
62. slit facial defects, syndrome I-II gill arch
63. ash, periodontal, bone pocket

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

### **1. Therapeutic dentistry:**

#### **A) Non-carious lesions of the hard tissues of the teeth:**

1. hyperesthesia
2. hypoplasia, enamel hyperplasia
3. fluorosis
4. erosion of the hard tissues of the tooth
5. wedge-shaped defect
6. abrasion of teeth
7. necrosis of the hard tissues of the tooth
8. discoloration
9. traumatic injuries of teeth

#### **B) Caries and its complications:**

10. caries
11. pulpitis
12. periodontitis

#### **C) Periodontal disease:**

13. papillitis
14. gingivitis (localized, generalized)
15. periodontitis (localized, generalized)
16. periodontitis
17. idiopathic periodontal diseases

#### **D) Diseases of the oral mucosa (SOPR):**

18. traumatic lesions of the SOPR
19. autoinfectious diseases of SOPR (acute aphthous stomatitis, herpetic, ulcerative-necrotic, candidal lesions of SOPR)
20. secondary bacterial diseases (diphtheria, tuberculosis, syphilis, gonorrhea)



21. SOPR disease in dermatoses with autoimmune component of pathogenesis (vesicles, herpes zoster, lupus erythematosus)
22. changes in SOPR in allergic lesions
23. changes in SOPR in intoxications with salts of heavy metals
24. symptomatic viral diseases (AIDS, influenza, foot and mouth disease, infectious mononucleosis)
25. symptomatic manifestations of SOPR of diseases of the gastrointestinal tract (peptic ulcer, gastritis, enteritis, colitis, chronic hepatitis)
26. symptomatic manifestations of SOPR diseases of the cardiovascular system (circulatory failure, essential hypertension)
27. symptomatic manifestations of SOPR diseases of the endocrine system (acromegaly, Itsenko-Cushing syndrome, diabetes, hyper- and hypothyroidism)
28. symptomatic manifestations of SOPR of blood diseases (anemia, thrombocytopenic purpura, leukemia)
29. symptomatic manifestations of SOPR hypo- and avitaminosis
30. diseases and anomalies of the tongue (desquamative glossitis, rhomboid glossitis, folded tongue, hairy tongue)
31. neurogenic diseases of the tongue (glossalgia, stomalgia, ganglionitis)
32. independent and symptomatic cheilitis (actinic, meteorological, contact allergic, glandular, exfoliative, eczematous, atopic)

**E) Precancerous SOPR and red lip border:**

33. obligate precancers (Bowen's disease, warty precancer, limited precancerous hyperkeratosis, manganotti cheilitis)
34. optional precancers

**2. Pediatric dentistry:**

**A) Pathology of teeth:**

35. enamel hypoplasia (systemic and local)
36. endemic fluorosis
37. congenital malformations of the hard tissues of the teeth in children
38. caries and its complications in temporary and permanent teeth in children
39. traumatic lesions of the teeth

**B) Periodontal pathology:**

40. gingivitis
41. idiopathic periodontal disease
42. periodontitis

**C) Pathology of the oral mucosa (SOPR):**

43. allergic diseases SOPR
44. anomalies and diseases of the tongue
45. fungal lesions of SOPR in children
46. changes in SOPR in systemic diseases
47. changes in SOPR in specific diseases
48. manifestations of acute viral and infectious diseases of SOPR (diphtheria, chickenpox, measles, infectious mononucleosis, scarlet fever)
49. viral diseases of SOPR (acute herpetic stomatitis, recurrent herpetic stomatitis, shingles)
50. independent and symptomatic cheilitis, glossitis

**D) Inflammatory diseases of the maxillofacial area:**

51. periostitis

- 52. osteomyelitis of the jaws
- 53. diseases of the temporomandibular joint
- 54. diseases of the salivary glands
- 55. lymphadenitis
- 56. neodontogenic inflammatory processes of soft tissues (boil, carbuncle, erysipelas)
- 57. specific inflammatory processes (tuberculosis, syphilis, actinomycosis)
- 58. phlegmons and abscesses

**E) Injuries of the maxillofacial area:**

- 59. damage to soft tissues (wounds, burns), teeth, jaws, facial bones, TMJ

**E) Tumors and tumor-like formations of the maxillofacial area:**

- 60. benign tumors and tumor-like neoplasms of soft tissues and bones of the face
- 61. malignant tumors of soft tissues and bones of the face

**G) Congenital malformations of the face:**

- 62. nonunion of the upper lip, alveolar process, hard and soft palate (isolated and through)
- 63. anomalies of attachment of soft tissues of the oral cavity (bridles of the lips, tongue, shallow vestibule of the oral cavity)
- 64. congenital syndromes

**C) Diseases of the TMJ, ankylosis**

**3. Surgical dentistry:**

**A) Inflammatory diseases of the maxillofacial area:**

- 65. deep and superficial phlegmons, abscesses
- 66. lymphadenitis
- 67. trigeminal neuritis, facial nerve, neuralgia
- 68. neodontogenic inflammatory processes
- 69. odontogenic sinusitis
- 70. periodontitis, periodontitis, alveolitis, periostitis, osteomyelitis; pericoronaritis
- 71. inflammatory diseases of the salivary glands
- 72. specific inflammatory processes (tuberculosis, syphilis, actinomycosis)

**B) Injuries of the maxillofacial area:**

- 73. injuries of teeth and bones of the facial skeleton
- 74. injuries of soft tissues, tongue and SOPR
- 75. gunshot wounds and non-gunshot wounds of maxillofacial tissues; craniomaxillary and facial injuries
- 76. thermal, chemical, electrical and radiation damage to the tissues of the maxillofacial localization; combined injury

**C) Diseases of the temporomandibular joint (TMJ):**

- 77. arthritis, arthrosis-arthritis, arthrosis
- 78. ankylosis
- 79. TMJ dysfunction, dislocations and contractures of the mandible

**D) Tumors and tumor-like formations of SOPR, salivary glands, soft tissues of the maxillofacial localization and neck, bones of the facial skeleton:**

- 80. benign tumors and tumor-like formations
- 81. precancerous diseases and malignant tumors of SOPR, salivary glands, soft tissues of the maxillofacial localization and neck, bones of the facial skeleton

**E) Congenital and acquired defects and deformations of the tissues of the head and neck**

82. abnormalities in the development of teeth, congenital deformities of the jaws, defects and deformations of the bones of the facial skeleton, combined anomalies and deformations of the cerebral and facial skeleton and the dental-maxillary system

83. congenital defects and deformities of the soft tissues of the head and neck

84. acquired defects and deformations of soft tissues of the maxillofacial localization and neck, bones of the facial skeleton

85. age-related changes in the soft tissues of the face and neck, vertical and horizontal atrophy of the alveolar processes of the jaw bones, adentia, recession of the gums

86. cosmetic defects and deformations of organs and tissues of the head and neck

**E) Dysplastic diseases of maxillofacial localization**

87. dystrophic diseases of periodontal tissues

88. sialose

89. dysplastic diseases of the soft tissues of the head and neck

**E) Neurostomatological diseases**

90. neuritis, trigeminal neuralgia

**4. Orthopedic dentistry:**

91. partial loss of teeth

a) distally limited defects of the dentition

b) distally unlimited defects of the dentition

92. complete loss of teeth

93. excessive abrasion of teeth

94. defects of the coronal part of the teeth

95. complete destruction of the crown of the tooth

96. dental deformities

97. parafunction of the masticatory muscles

98. traumatic occlusion

99. injuries and defects of the jaws, nose, ears, orbits, combined defects

100. TMJ disease

101. thyroid dysfunction

**5. Orthodontics**

**A) anomalies of individual teeth:**

102. sizes

103. forms

104. quantity

105. retention

**B) anomalies in the position of the teeth:**

106. diastema and trema

107. congestion of teeth

108. tortoanomaly

109. vestibulo-oral position of teeth, dystopia, transposition, supra-infraposition

**C) sagittal occlusion anomalies:**

110. progeny (mesial) (skeletal, dentoalveolar)

111. prognathism (distal) (skeletal, dentoalveolar)

**D) vertical occlusion anomalies:**

- 112. open (skeletal, alveolar)
- 113. deep (skeletal, dentoalveolar)

**E) transverse occlusion anomalies:**

- 114. cross (unilateral or bilateral, with or without displacement of the mandible) (skeletal, dentoalveolar).

**List 2.1 (major dental diseases)**

- 1. non-carious lesions of the teeth
- 2. caries of temporary and permanent teeth
- 3. pulp disease of temporary and permanent teeth
- 4. periodontitis of temporary and permanent teeth
- 5. papillitis
- 6. gingivitis
- 7. periodontitis
- 8. periodontitis
- 9. traumatic injuries
- 10. autoinfectious diseases of SOPR (acute aphthous stomatitis, herpetic, ulcerative-necrotic, candidal lesions of SOPR)
- 11. secondary bacterial diseases (diphtheria, tuberculosis, syphilis, gonorrhea)
- 12. manifestations of immunodeficiency on SOPR (AIDS)
- 13. allergic lesions
- 14. alveolitis
- 15. pericoronaritis
- 16. periostitis
- 17. lymphadenitis
- 18. traumatic injuries of the soft tissues of the face
- 19. acute and habitual dislocation of the lower jaw
- 20. uncomplicated fractures of the upper and lower jaws
- 21. defects of the coronal part of the teeth
- 22. partial and complete absence of teeth

**List 3. Physiological conditions and somatic diseases that require special tactics of patient management**

**A) Physiological conditions:**

- 1. pregnancy

**B) Diseases of the blood and blood-forming organs:**

- 2. anemia
- 3. hemophilia
- 4. leukemia
- 5. thrombocytopenic purpura

**C) Cardiovascular diseases:**

- 6. hypertension
- 7. infectious endocarditis
- 8. heart defects
- 9. heart failure
- 10. cardiac arrhythmia

11. the presence of a pacemaker

**D) Mental disorders:**

- 12. acute psychosis, including alcoholic delirium
- 13. epilepsy

**E) Diseases of the respiratory system and mediastinum:**

- 14. bronchial asthma

**G) Pathology of the ENT organs:**

- 15. tonsillitis
- 16. rhinitis
- 17. sinusitis
- 18. curvature of the nasal membrane

**G) Diseases of the endocrine system:**

- 19. diabetes mellitus
- 20. thyroid disease

**3) Pathology of the musculoskeletal system and connective tissue:**

- 21. systemic vasculitis (hemorrhagic vasculitis)
- 22. rheumatoid arthritis
- 23. Posture disorders

**E) Infectious and parasitic diseases:**

- 24. HIV / AIDS
- 25. viral hepatitis
- 26. diphtheria
- 27. to hold
- 28. anthrax
- 29. tuberculosis of different localization
- 30. cholera
- 31. plague
- 32. gonorrhea
- 33. syphilis

**List 4 (emergencies):**

- 1. asphyxia (including newborns)
- 2. hypertensive crisis
- 3. acute respiratory failure
- 4. acute heart failure
- 5. acute poisoning
- 6. "acute" abdomen
- 7. electric shock
- 8. fainting
- 9. external bleeding
- 10. collapse
- 11. coma
- 12. swelling of the larynx
- 13. Quincke's edema
- 14. burns and frostbite

15. convulsions
16. drowning
17. physiological childbirth
18. shock
19. bone injury

### **List 5 (laboratory and instrumental research):**

1. analysis of punctate neoplasms of soft tissues and bones
2. histomorphological examination of biopsy of lymph nodes, salivary glands, mucous membranes, soft tissues
3. analysis of blood glucose
4. study of control and diagnostic models of jaws
5. study of the functions of the thyroid gland (breathing, swallowing, speech, chewing and TMJ)
6. general blood test
7. general analysis of urine
8. biochemical analysis of blood
9. immunological examination in dental diseases
10. analysis of the coagulogram
11. interpretation of radiological diagnosis of the skull, dental apparatus, salivary glands
12. cytological examination of organs and tissues of the dental apparatus
13. microbiological examination of oral fluid, smears with SOPR, periodontium
14. functional diagnosis of the oral cavity (luminescent, rheoparodontography, stomatoscopy, capillaroscopy, vacuum test, etc.).

### **List 6 (medical manipulations)**

1. perform artificial respiration
2. perform indirect heart massage
3. fix the tongue
4. to temporarily stop external bleeding
5. to carry out primary surgical treatment of wounds
6. wash the stomach, intestines
7. to carry out transport immobilization
8. to inject drugs (intramuscular, subcutaneous, intravenous jet and drip)
9. measure blood pressure
10. to carry out a primary toilet of the newborn
11. determine blood type, rhesus affiliation

### **List 7 (dental manipulations)**

1. alveolotomy
2. amputation of the pulp of temporary and permanent teeth
3. anthropometric studies of jaw models
4. selective grinding of teeth, alignment of the occlusal surface, occlusogram, filling periodontogram
5. manufacture of temporary splints and splinting for fractures of teeth, alveolar processes and jaws
6. removal of dental layers
7. determination of acid resistance of tooth enamel (TER, KOSHRE, SKT test)
8. definition and fixation of the central ratio
9. definition of Tsilinsky's symptom
10. determination of constructive occlusion

11. determination of the sagittal gap
12. determination of the vertical gap
13. determination of signs of orthognathic occlusion and its varieties
14. determination of signs of pathological types of bites
15. correction of mandibular dislocation
16. sealing of fissures
17. diagnostic use of dyes
18. diathermocoagulation
19. extirpation of the pulp of temporary and permanent teeth
20. electroodontodiagnostics
21. the use of local action in the treatment of periodontal disease and SOPR
22. local anesthesia in the treatment of dental diseases by various methods (application, infiltration, conduction)
23. removal of artificial crowns
24. tooth-preserving surgical interventions for periodontitis
25. stop bleeding after tooth extraction
26. deep fluoridation of hard tissues of temporary teeth
27. correction of partial and complete removable dentures
28. correction and activation of removable orthodontic appliances
29. curettage of the well
30. curettage of periodontal pockets
31. drug treatment of the affected areas of the oral mucosa and periodontium
32. application and removal of temporary fillings and tight bandages in the treatment of caries, pulpitis, periodontitis
33. imposition of a rubber dam
34. application of maxillofacial devices (repositioning, forming, replacing and fixing)
35. obturation of root canals of temporary and permanent teeth with different materials
36. obtaining anatomical and functional prints with different impression material
37. obtaining models of jaws
38. obtaining impressions from intraosseous implants
39. parallelometry when planning the design of a clasp prosthesis
40. check the design of the prosthesis in the partial and complete absence of teeth
41. periostotomy
42. filling of carious cavities of temporary and permanent teeth with different filling materials
43. coating of teeth with therapeutic and prophylactic varnishes, gels, desensitizers
44. preparation of teeth for metal stamped, plastic solid, solid combined, metal-free crown
45. preparation of teeth for tabs and veneers
46. preparation and cleaning of root canals of temporary and permanent teeth
47. preparation of the root of the tooth under the pin structure
48. preparation of carious cavities of temporary and permanent teeth, taking into account the type of filling material
49. fitting different types of artificial crowns
50. conducting intradental electrophoresis
51. ligature ligation of teeth
52. carrying out professional hygiene of an oral cavity
53. carrying out professional hygiene in the area of implants
54. conducting physiological separation
55. conducting periodontal probing
56. direct and indirect pulp coating
57. registration of the position of the upper jaw with the help of the facial arch

58. disclosure of periodontal abscess
59. incision and excision of the hood in pericoronaritis
60. compilation of the IGPR algorithm
61. temporary immobilization for fractures of the jaws
62. typical and atypical removal of temporary and permanent teeth
63. cystotomy
64. fixation of crowns and bridges
65. fixation of an orthodontic ring, crown
66. fixation of the central ratio at II, III, IV groups of defects
67. surgical treatment of soft tissues of the face within one anatomical area
68. grinding and polishing of seals from all types of sealing materials



## STRUCTURAL AND LOGICAL SCHEME OF THE EDUCATIONAL PROGRAM

Distribution by courses and semesters									
And the course		II course		Third year		IV course		V course	
1 sem	2 sem	3 sem	4 sem	5 sem	6 sem	7 sem	8 sem	9sem	10 sem
Foreign Language	Foreign language (for professional purposes)								
Latin language and medical terminology									
Ukrainian language (for professional purposes)									
History of Ukraine and Ukrainian culture									
	Philosophy								
Medical Biology Step 1									
Medical and biological physics									
Medical chemistry									
	Bioorganic and biological chemistry Step 1								
Human Anatomy Step 1		Physiology Step 1							
Histology, cytology and embryology Step 1		Microbiology, Virology and Immunology Step 1							
Life safety, basics of bioethics and biosafety								Emergency and urgent medical care <i>Step 2</i>	
					Surgery (including oncology, neurosurgery)				
	Hygiene and ecology			Internal medicine (including infectious diseases, epidemiology, clinical pharmacology)					
Elective courses				Elective courses		Elective courses		Elective courses	
			Pathomorphology Step 1						
			Pathophysiology Step 1						
			Pharmacology Step 1						
				Radiology					
				Forensic medicine (dentistry) Medical jurisprudence of Ukraine					
	Propaedeutics of therapeutic dentistry			Prevention of dental diseases					
	Propaedeutics of orthopedic dentistry			Therapeutic dentistry					
		Propaedeutics of pediatric therapeutic dentistry		Surgical dentistry					
					Pediatric Therapeutic Dentistry Step 2				
					Pediatric Surgical Dentistry Step 2				
				Orthopedic dentistry (including implantology)					
				Orthodontics Step 2					
						ZMP	SMP (ophthalmology)		

					(otorhinolaryngology) Step 2	Step 2		
						SMP (ophthalmology, neurology, including neurostomatology, medical psychology) <i>Step 2</i>		
						ZMP (dermatology and venereology) Step 2		
						SMP (endocrinology, psychiatry and narcology)		
						ZMP (physical rehabilitation and sports medicine)		
	Industrial practice (Nursing practice in dentistry)	Industrial practice (patient care)		Industrial medical practice		Industrial dental practice		Industrial dental practice
				Certification of OSQE (Stage 1) Step 1, English for professional purposes				Certification of OSQE (Stage 2) Step 2, OSP (K) I