

**MINISTRY OF HEALTH OF UKRAINE  
IVANO-FRANKIVSK NATIONAL MEDICAL UNIVERSITY**

**PROFESSIONAL EDUCATION PROGRAM**

**«MEDICINE»**

**Second (master) level of higher education**

**Field of knowledge 22 Healthcare**

**Specialty 222 Medicine**

**Educational qualification: Master of Medicine**

**Professional qualification: Doctor of Medicine**

Edition 2020-06

APPROVED BY THE ACADEMIC COUNCIL  
Chairman of the Academic Council **Nikola OSTROVSKYI**



(Order no. 10 of August 27<sup>th</sup>, 2024)

Education program comes into force on September 2<sup>nd</sup>, 2024

Rector of the University **Roman YATSYSHYN**



(Order no. 1079 of August 27<sup>th</sup>, 2024)

**Ivano-Frankivsk - 2024**

LETTER OF  
APPROVAL  
of Professional Education Program

**Proposed for consideration:**

Education Program Guarantor: OSTAFIYCHUK Svitlana – Doctor of Medical Sciences, Professor, Head of the Department of Obstetrics and Gynecology named after Professor I.D. Lanovyi;

1. *KOBRYN Taras* – PhD, Associate Professor of the Department of Infectious Diseases and Epidemiology, Pro-rector for Science and Education and Medical Work;
2. *VOLOSIANKO Andrii* – Doctor of Medical Sciences, Professor, Head of the Department of Pediatrics;
3. *HENYK Nataliia* – Doctor of Medical Sciences, Professor of the Department of Obstetrics and Gynecology named after Professor I.D. Lanovyi;
4. *HUDZ Ivan* – Doctor of Medical Sciences, Professor, Head of the Department of General Surgery;
5. *DETSYK Oryna* – Doctor of Medical Sciences, Professor, Head of the Department of Social Medicine and Public Health;
6. *KOSTITSKA Iryna* – Doctor of Medical Sciences, Professor of the Department of Endocrinology;
7. *MIZIUK Mykhailo* – Doctor of Medical Sciences, Professor, Head of the Department of Hygiene and Ecology.
8. *ADAMIV Mariia* – methodologist at the educational department;
9. *HAFIYCHUK Khrystyna* – student majoring in 222 Medicine.

**Proposed by:**

Cycle Methodical Commission of PEP

«Medicine» specialty 222 Medicine

Minutes no. 1 of August 27<sup>th</sup>, 2024

Chairwoman of CMC



Svitlana OSTAFIYCHUK

**Approved by:**

Central Methodical Council of IFNMU

Minutes no.10 of August 27<sup>th</sup>, 2024

Chairwoman of CMC



Serhiy HERASHCHENKO

## PREFACE

Professional Education Program has been elaborated in accordance with requirements of Article 1 Item 17, Article 10 Item 3 and Article 29 of the Law of Ukraine “On Higher Education”, National Classifier of Ukraine: “Classifier of Professions” SC 003: 2010, Resolution of the Cabinet of Ministers no. 266 of April 29<sup>th</sup>, 2015 “On approval of the list of subject areas and specialties in which the training of applicants for higher education is carried out”.

Professional Education Program has been amended in accordance with the Standard of Higher Education approved by Order of the Ministry of Education and Science of Ukraine of November 8<sup>th</sup>, 2021 no. 1197.

Professional Education Program was amended in accordance with the Law of Ukraine ‘On Amendments to Certain Laws of Ukraine on the Development of Individual Educational Trajectories and Improvement of the Educational Process’ dated April 23, 2024, 3642-IX, which entered into force on August 16, 2024.

Professional Education Program has been developed by the workgroup in specialty 222 “Medicine” of Ivano-Frankivsk National Medical University consisting of:

1. *OSTAFIICHUK Svitlana* – Doctor of Medical Sciences, Professor, Head of the Department of Obstetrics and Gynecology named after Professor I.D. Lanovyi;
2. *KOBYRN Taras* – PhD, Associate Professor of the Department of Infectious Diseases and Epidemiology, Pro-rector for Science and Education and Medical Work;
3. *VOLOSIANKO Andrii* – Doctor of Medical Sciences, Professor, Head of the Department of Pediatrics;
4. *HENYK Nataliia* – Doctor of Medical Sciences, Professor of the Department of Obstetrics and Gynecology named after Professor I.D. Lanovyi;
5. *HUDZ Ivan* – Doctor of Medical Sciences, Professor, Head of the Department of General Surgery;
6. *DETSYK Oryna* – Doctor of Medical Sciences, Professor, Head of the Department of Social Medicine and Public Health;
7. *KOSTITSKA Iryna* – Doctor of Medical Sciences, Professor of the Department of Endocrinology;
8. *MIZIUK Mykhailo* – Doctor of Medical Sciences, Professor, Head of the Department of Hygiene and Ecology.
9. *ADAMIV Mariia* – methodologist at the educational department;
10. *HAFIYCHUK Khrystyna* – student majoring in 222 Medicine.

### Academic community reviews:

1. *Stanislavchuk M.A.* – Doctor of Medical Sciences, Professor, Head of the Department of Internal Medicine of Vinnytsia National Pirogov Memorial Medical University;
2. *Fediv O.I.* – Doctor of Medical Sciences), Professor, Head of the Department of Internal Medicine and Infectious Diseases of Bukovinian State Medical University/

**Reviews of external stakeholders:**

1. *Pavlushynskiy Yu.M.* – Director of the municipal non-profit enterprise “Ivano-Frankivsk Region Perinatal Center of Ivano-Frankivsk Region Council”;
2. *Yakymchuk V.M.* – Director of the municipal non-profit enterprise “Ivano-Frankivsk Region Clinical Cardiology Center of Ivano-Frankivsk Region Council”;
3. *Malofii L.S.* – Director of the municipal non-profit enterprise “Ivano-Frankivsk Region Phthisiopulmonology Center of the Ivano-Frankivsk Region Council”;
4. *Bahrii M.M.* – IFSMA medical faculty graduate of 2004, Kandidat der medizinischen Wissenschaften, Institut für Pathologie und Zytologie am Ruppiner Klinikum, Hochschulklinikum der medizinischen Hochschule Brandenburg, Neuruppin, Bundesland Brandenburg, Bundesrepublik Deutschland.

## 1. Outline of Education Program, specialty 222 «Medicine»

<b>1 – General Information</b>	
<b>Full name of higher educational institution and structural unit</b>	Ivano-Frankivsk National Medical University (IFNMU) Medical Faculty
<b>Degree of higher education and name of qualification in the original language</b>	Education degree – Master. Educational qualification – Master of Medicine. Professional qualification – Doctor. Qualification in the diploma – Master of Medicine. Doctor.
<b>Official name of Education Program</b>	Professional Education Program “Medicine” of the second (master) level of higher education.
<b>Diploma type and Education Program volume</b>	Master degree diploma, unitary. The amount of ECTS credits for obtaining master degree in specialty “Medicine” on the basis of complete general secondary education is 360 ECTS credits, the term of study is 5 years and 10 months (full-time) or 360 ECTS credits, the term of study is 4 years and 10 months (full-time) on the basis of a professional junior bachelor’s degree (junior bachelor, junior specialist) in a related speciality. On the basis of “junior bachelor” degree (educational qualification level – “junior specialist”), University has the right to admit and transfer no more than 60 ECTS credits received within the previous education program of junior bachelor (junior specialist) training in specialty 223 “Nursing”.
<b>Accreditation availability</b>	Professional Education Program was accredited by the National Agency for Higher Education Quality Assurance on June 11 <sup>th</sup> , 2021. PEP Accreditation Certificate no. 1724. ( <a href="https://www.ifnmu.edu.ua/uk/pryimalna-komisia/litsenziia-ta-sertyfikaty-pro-akredytatsiiu">https://www.ifnmu.edu.ua/uk/pryimalna-komisia/litsenziia-ta-sertyfikaty-pro-akredytatsiiu</a> )
<b>Cycle/level</b>	NFQ of Ukraine – level 7, FQ-EHEA – second cycle, EQF-LLL – level 7

<b>Preconditions</b>	Requirements for previous education – complete general secondary education (NQF level 3 or higher) (according to the results of the National Multi-Subject Test or external independent evaluation certificates) or professional junior bachelor degree (junior bachelor, education-qualification level of a junior specialist) in therelevant specialty of medical field (according to the results of entrance examinations).
<b>Language(s) of instruction</b>	Ukrainian, English
<b>Education Program validity</b>	Education program is valid to July 1 <sup>st</sup> , 2026, with an annual scheduled update
<b>Internet address of permanent placement of Education Program description</b>	<a href="https://www.ifnmu.edu.ua/uk/publiczna-informatsiya/osvitni-prohramy">https://www.ifnmu.edu.ua/uk/publiczna-informatsiya/osvitni-prohramy</a>

## 2 – Education Program Purpose

Training of a specialist who is able to solve complex tasks and problems in the field of healthcare or in training process, which involves research and/or innovation and is characterized by uncertainty in conditions and requirements.

Development of the ability to apply acquired knowledge, skills, abilities and understanding in humanitarian, fundamental and professionally-oriented disciplines in solving standard tasks in the field of healthcare, the scope of which provides a list of syndromes and symptoms of diseases, physiological conditions and somatic disorders requiring special patient management tactics, emergencies, laboratory and instrumental studies, medical manipulations.

## 3 - Characteristics of Education Program

<b>Official name of Education Program</b>	Professional Education Program “Medicine” of the second (master) level of higher education
<b>Subject area (field of study, specialty, specialization)</b>	Preservation of health, prevention, diagnosis and treatment of human diseases at the individual, family and population levels Field of study 22 “Healthcare” Specialty 222 “Medicine”
<b>Education Program orientation</b>	Professional Education Program is focused on students’ gaining professional knowledge and acquiring skills to train a competitive master of medicine of international level and is based on the latest advances of medical science, the principles of modern vocational education, taking into account the current state and modern standards of higher

	education and healthcare for successful implementation of professional activities.
<b>Main focus of Education Program and specialization</b>	<p>The education program is focused on training of competitive specialists in the field of medicine, being able to carry out their professional activities on the basis of mastering a set of competencies, solving complex specialized tasks and problems in healthcare or during learning process, which are characterized by uncertainty in prevention, diagnosis and treatment of nosological forms at the individual or public level, using algorithms, biomedical, social and psycho-pedagogical methods, which are based on knowledge of the morpho-functional state of organs and organ systems, assessment of the ecosystem impact on public health, capable for planning and implementation of adequate professional activity of a doctor on the basis of professional training disciplines.</p> <p>Special higher education in the field of knowledge 22 “Healthcare”, specialty 222 “Medicine”</p> <p>Key words: healthcare, medicine, higher education, master degree.</p>
<b>Program features</b>	<p>The program is designed to form professional competencies of future professionals, it combines students’ theoretical and practical training, based on the latest scientific results and principles of science-based medical practice in healthcare, it is implemented in a logical sequence of disciplines and involves practicing (clinical) professionals’ guidance of clinical practice and practical classes in disciplines of professional training cycle.</p> <p>Practical training sessions are obligatory for all the students, they are held on the basis of the University Clinic of IFNMU, healthcare facilities of Ivano-Frankivsk and the region, healthcare institutions in Ukraine and abroad that meet the requirements for practice bases, with the consent of the head of the institution.</p>
<b>4 – Graduates’ Suitability for Employment and Further Education</b>	

<p><b>Suitability for employment</b></p>	<p>A specialist is prepared to work according to Classifier of Economic Activities SC 009:2010:  Section Q. Health and social care  Section 86. Healthcare  Group 86.1 Hospital Activities  Group 86.2 Medical and dental practice  Class 86.21 General medical practice  Class 86.22 Specialized medical practice  After completing Professional Education Program, specialty 222 “Medicine”, a specialist is able to perform the following professional work:</p> <ul style="list-style-type: none"> <li>• Internship doctor (CP code – 3229);</li> <li>• Junior doctor (CP code – 3221);</li> <li>• Resident doctor (CP code – XXX);</li> <li>• Research scientist (General Medicine, except for Dentistry) (CP code – 2221.1);</li> <li>• Scientific researcher in the field of Medicine (except for Nursing and Obstetrics) (CP code – 2229.1);</li> <li>• Higher education institution teacher (CP code – 2310.2)</li> </ul>
<p><b>Further education</b></p>	<p>A graduate can enter postgraduate education programs (internship, residency), where training according to education programs of a doctor is carried out.  After internship, residency training a specialist is awarded the qualification of a doctor being able to perform the professional work noted in SC 003:2010 and can hold a relevant medical position:  Class 222 Professionals in the field of Medicine (except for Nursing)  Subclass 2221 Professionals in the field of General Medicine (except for Dentistry)  Group 2221.2 Doctors  Subclass 2225 Professionals in the field of Medical and Preventative Care  2225.2 Doctors, specialists in the field of Medical and Preventative Care  2229.2 Professionals in the field of Medicine (except for Nursing and Obstetrics)  Such a specialist has the right:</p> <ul style="list-style-type: none"> <li>- to undergo specialization and perform doctor’s relevant professional work of a certain specialty, noted in current National Classifier of Ukraine “Classifier of Professions”, to hold a relevant medical position;</li> <li>- to continue education at the third (educational and</li> </ul>

	<p>scientific) level of higher education to obtain PhD degree;</p> <ul style="list-style-type: none"> <li>- to acquire another specialty, which gives the opportunity to hold a relevant medical position and perform relevant professional work;</li> <li>- to improve qualification level in continuing postgraduate education system, specialty 222 “Medicine”, as well as to acquire additional qualifications in postgraduate education system.</li> </ul>
<b>5 – Teaching and Assessment</b>	
<b>Teaching and studying</b>	<p>Integrative, competence, student-centered, personality-oriented learning, initiative self-directed learning, problem-oriented learning, learning through work and clinical placement in accordance with the requirements of the field standards of higher education of specialist qualification.</p> <p>Lectures, seminars, practical classes in small groups, work placement, practical training in educational and practical centers, consultations with teachers and students’ independent work, university virtual learning environment, forms of blended learning (e-learning).</p>
<b>Assessment</b>	<p>Assessment of learning outcomes is carried out according to the principles of differentiation, individuality, topicality, objectivity, systematicity and systemacity, planning element, requirements unity, openness, transparency, accessibility and clarity of assessment methods, taking into account personal students’ capabilities.</p> <p>The assessment system of students’ knowledge in each discipline includes a system of parameters which reflect their objective knowledge and skills, it is conducted in the form of current, midterm and final control of knowledge, assessment of results of practical training sessions and graduates’ certification and is based on academic integrity and transparency.</p> <p>Current control is testing of knowledge during practical and seminar classes in the form of tests, reports or projects presentation and practical skills demonstration.</p> <p>Final knowledge control is carried out in the form of pass-fail tests, summative module assessments and examinations.</p> <p>Certification of students for the second (master) level of higher education, specialty 222 “Medicine” is carried out in the form of the Unified State Qualification Examination (USQE). The Unified State Qualification Examination is conducted in accordance with the Procedure for conducting the Unified State Qualification Examination for master</p>

	<p>degree applicants in specialties of the field of knowledge “Healthcare” and includes:</p> <ul style="list-style-type: none"> <li>• Integrated examination “STEP” (conducted in two test stages – “STEP 1” (the level of professional competence in general (fundamental) disciplines is assessed) and “STEP 2” (the level of professional competence in professionally oriented (clinical) disciplines is assessed), which evaluates conformity of specialists’ training quality to higher education standards and is carried out by the State Organization “Testing Board for Professional Competence Assessment of Higher Education Trainees in Medicine and Pharmacy” at the Ministry of Health of Ukraine:</li> <li>• Examination in Professional English, which assesses a student’s competence in professional English and is conducted by the Testing Board at the Ministry of Health of Ukraine;</li> <li>• Objective Structured Practical (Clinical) Examination, which assesses the graduate’s readiness for professional activities in accordance with the requirements of higher education standard by demonstrating practical (clinical) components of professional competence on a real object or model and is conducted by the University Examination Board.</li> </ul>
<b>6 – Program Competencies</b>	
<b>Integral Competency</b>	Ability to solve complex research and innovation tasks in the field of medicine. Ability to continue learning with a high degree of autonomy.
<b>General Competencies (GC)</b>	<p>GC 1. Ability to think abstractly, analyze and synthesize.  GC 2. Ability to learn and master modern knowledge.  GC 3. Ability to apply knowledge in actual practice.  GC 4. Knowledge and understanding of the subject essence as well as professional activity comprehension.  GC 5. Ability to adapt and take actions in a new situation.  GC 6. Ability to take reasoned decisions.  GC 7. Teamwork ability.  GC 8. Skills in interpersonal interaction.  GC 9. Ability to communicate in the foreign language.  GC 10. Skills in information and communication technologies application.  GC 11. Ability to search, process and analyze information from various sources.  GC 12. Being determined and persistent in completing tasks and responsibilities.</p>

	<p>GC 13. Comprehension of equal opportunities and gender-specific issues.</p> <p>GC 14. Ability to exercise one’s rights and duties as a member of society, to realize the values of civil (democratic) society and the need for its sustainable development, supremacy of the law, human and civil rights and liberties in Ukraine.</p> <p>GC 15. Ability to preserve and multiply moral, cultural and scientific values and achievements of society by the virtue of comprehension of the history and consistent patterns of development of the subject area, its place in the general system of knowledge about nature and society as well as in social, technical and technological advancement, to make use of various types and forms of physical activity for dynamic recreation and healthy lifestyle.</p> <p>GC 16. Ability to make decisions and act in a manner free from corruption and other forms of dishonesty.</p>
<p><b>Professional Competencies (PC)</b></p>	<p>PC 1. Ability to collect medical information about a patient and to analyze clinical data.</p> <p>PC 2. Ability to identify the list of essential laboratory and instrumental examinations and to assess their results.</p> <p>PC 3. Ability to make preliminary and clinical diagnoses of diseases.</p> <p>PC 4. Ability to determine patients’ rational work and rest patterns in disease treatment.</p> <p>PC 5. Ability to determine patients’ rational diet pattern in disease treatment and prevention.</p> <p>PC 6. Ability to determine principles and patterns of disease treatment and prevention.</p> <p>PC 7. Ability to diagnose emergencies.</p> <p>PC 8. Ability to determine tactics and to provide emergency medical care.</p> <p>PC 9. Ability to provide medical evacuation measures.</p> <p>PC 10. Skills to perform medical manipulations.</p> <p>PC 11. Ability to solve medical problems in new or unfamiliar environments on the basis of incomplete or limited information, taking into account aspects of social and ethical responsibility.</p> <p>PC 12. Ability to determine management tactics of physiological pregnancy, physiological delivery and postpartum period. Family planning and contraceptive counselling skills.</p> <p>PC 13. Ability to take sanitation and hygiene preventive measures.</p>

	<p>PC 14. Ability to plan and take prophylactic and anti-epidemic measures to prevent infectious diseases.</p> <p>PC 15. Ability to assess working capacity.</p> <p>PC 16. Ability to maintain medical records including e-forms.</p> <p>PC 17. Ability to evaluate environmental impact, socio-economic and biological determinants on individual, family, and population' health.</p> <p>PC 18. Ability to analyze activities of a doctor, unit, and healthcare institution, to make arrangements for medical care of high quality and improvement of medical resource utilization efficiency.</p> <p>PC 19. Ability to make arrangements for organization and integration of public medical care and medical service marketing.</p> <p>PC 20. Ability to conduct epidemiological and medical statistical studies of public health; to process government, social, economic and medical information.</p> <p>PC 21. Ability to clearly and unambiguously communicate knowledge, conclusions and arguments on health problems and related issues to specialists and non-specialists, in particular to students.</p> <p>PC 22. Ability to manage health workflows that are complex, unpredictable and require new strategic approaches.</p> <p>PC 23. Ability to develop and implement scientific and applied projects in the field of healthcare.</p> <p>PC 24. Adherence to ethical principles when working with patients and laboratory animals.</p> <p>PC 25. Adherence to professional and academic integrity, responsibility for the accuracy of scientific outcomes.</p>
<b>7 – Program Learning Outcomes</b>	
<p><b>Program Learning Outcomes (PLO)</b> *(the lists are given in Appendix 1)</p>	<p>PLO 1. To possess thorough knowledge of professional activity structure. To be able to carry out professional activities that require updating and integration of knowledge. Responsibility for professional development, ability to further professional training with high level of autonomy.</p> <p>PLO 2. Understanding and knowledge of basic and clinical biomedical sciences at the level sufficient to solve professional problems in the field of healthcare.</p> <p>PLO 3. Specialized conceptual knowledge which includes scientific achievements in the field of healthcare and is the basis for research, critical reflection in the field of medicine and related interdisciplinary issues.</p> <p>PLO 4. To highlight and identify major clinical symptoms and syndromes (according to list 1); using standard methods,</p>

preliminary data of patient's anamnesis and examination, knowledge of human organs and systems, to make a possible nosological or syndromic preliminary clinical diagnosis of a disease (according to list 2).

PLO 5. To collect information on patient's health status, to assess psychomotor and physical development of a patient and condition of his organs and systems; to evaluate information about the diagnosis based on laboratory and instrumental examination results (according to list 4) taking into account the patient's age.

PLO 6. To establish final clinical diagnosis, while maintaining high ethical and legal standards, by making a reasonable decision and logic analysis of the obtained subjective and objective data of the clinical and additional health examination as well as differential diagnosis under the physician's supervision in the environment of a medical institution (according to list 2).

PLO 7. To administer and analyze additional (mandatory and optional) examination methods (laboratory, radiological, functional and/or instrumental) according to list 4 of patients with diseases and disorders of organs and systems for making a differential diagnosis (according to the list 2).

PLO 8. To determine the major clinical syndrome or the cause of the injured/victim's grave condition (according to list 3) by making reasoned decisions and evaluation of a person's medical state under any conditions (at home, outdoors, in a medical institution or its subdivision) including emergency situations, armed hostility and field conditions, under information and time restrictions.

PLO 9. To determine treatment content and principles (conservative therapy, surgical treatment) of patients with diseases (according to list 2) taking into account the patient's age in or outside a medical institution and during medical evacuation stages, including in the field, based on preliminary clinical diagnosis, while maintaining ethical standards and legal rules, by making reasoned decisions based on available algorithms and standard schemes, and to be able to justify personalized recommendations under physician's supervision in a medical institution when standard scheme expansion is needed.

PLO 10. To determine the necessary work, rest and diet patterns based on preliminary clinical diagnosis, while maintaining ethical standards and legal rules, by making reasoned decisions based on available algorithms and standard schemes.

PLO 11. To determine management approach, plan, and

tactics of physiological pregnancy, physiological delivery and postpartum period by making a reasoned decision based on available algorithms and standard schemes.

PLO 12. To assess a newborn's health status making a reasoned decision according to available algorithms and standard schemes, while maintaining ethical standards and legal rules.

PLO 13. To assess and monitor the development of a child, to provide recommendations concerning breastfeeding and nutrition depending on age, to organize preventive immunization according to the schedule.

PLO 14. To determine tactics and render emergency medical care (according to list 3) in a limited time-frame, according to existing clinical protocols and treatment standards.

PLO 15. To render medical assistance and to arrange medical evacuation procedures among the population and servicemen in emergency situations, including armed hostility and field conditions.

PLO 16. To form rational medical routes of patients; organize interaction with colleagues at one's own and other institutions, organizations and establishments; to apply tools to promote medical services on the market, based on the analysis of the population needs, in the conditions of functioning of a healthcare institution, its subdivision, in a competitive environment.

PLO 17. To perform medical manipulations (according to list 5) in a medical institution, at home or at work on the basis of a preliminary clinical diagnosis and/or patient's condition by making an informed decision according to relevant ethical and legal standards.

PLO 18. To determine the state of functioning and limitations of a person's life and duration of disability with the issuance of relevant documents, in the healthcare institution on the basis the disease and its course data, features of professional activity, etc. To maintain medical records of the patient and the population on the basis of regulatory documents.

PLO 19. To plan and carry out sanitary-hygienic and preventive activities for the occurrence and spread of diseases among the population.

PLO 20. To analyze the epidemiological situation and carry out measures of mass and individual, general and local prevention of infectious diseases.

PLO 21. To search for the necessary information in professional literature and databases of other sources, to analyze, evaluate and apply this information.

PLO 22. To apply modern digital technologies, specialized

	<p>software, statistical methods of data analysis for solving complex health issues.</p> <p>PLO 23. To evaluate the environmental impact on the human health for assessing public morbidity.</p> <p>PLO 24. To arrange the necessary level of individual safety (personal and persons' under care) in case of typical dangerous situations in the individual field of activity.</p> <p>PLO 25. To convey clearly and unambiguously one's own knowledge, conclusions and arguments on health issues and related problems to specialists and non-specialists.</p> <p>PLO 26. To manage health work processes which are complex, unpredictable and require new strategic approaches, to organize the work and professional development of the staff considering acquired skills of effective teamwork, leadership positions, good quality, accessibility and fairness, ensuring of integrated medical assistance.</p> <p>PLO 27. To communicate fluently in the state and English languages, both orally and in writing in order to discuss professional activities, research and projects.</p> <p>PLO 28. To make effective decisions on health issues, to assess essential resources, to take into account social, economic and ethical implications.</p> <p>PLO 29. To plan, organize and conduct activities for specific prevention of infectious diseases, including both mandatory and recommended preventive vaccinations in accordance with the National Calendar. To manage vaccine residues, to organize additional vaccination campaigns, including immunoprophylaxis measures.</p>
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### **8 – Resource Allocation for Program Implementation**

<p><b>Staffing</b></p>	<p>Academic staff involved in the Professional Education Program implementation have a qualification corresponding to the specialty, a confirmed level of scientific and professional activity. The vast majority of academic staff are full-time employees of Ivano-Frankivsk National Medical University, the employees of clinical departments are practitioners. Staffing of departments and project team meet the license conditions of educational activities.</p> <p>The group providing Professional Education Program “Medicine” consists of 541 academic employees, 312 (57.67 %) of them have a scientific degree and/or academic status and 81 (25.96 %) of them have a doctorate degree and/or are professors.</p> <p>The scientific and pedagogical specialty of teachers who provide the educational process corresponds to the disciplines</p>
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	<p>they teach.</p> <p>109 people (34.93%) have certificates in accordance with the Common European Framework of Reference for Languages at least level B2 or qualification documents (higher education diploma, scientific degree) related to the use of the English language. The share of staff having a degree of doctor of science or candidate of science and rendering lectures in the specialty as well as being permanent employees is 100%.</p> <p>The level of scientific and professional activity of scientific and pedagogical workers who provide the educational process meets the requirement of having at least four achievements in professional activity over the last five years, as provided for in clause 38 of the Licensing Conditions for Educational Activities. Graduate departments of special (professional) training are headed by specialists of the relevant scientific and pedagogical specialty – Doctors of Sciences.</p> <p>Professional development is carried out on a regular basis in accordance with the Procedure of Professional Development and Advanced Training of Educational and Academic Workers, which came into effect on January 1<sup>st</sup>, 2020, the frequency of professional development is once a year over the course of five years.</p> <p>Contracts of employment have been concluded with all members of the academic staff having passed the competition commission.</p>
<p><b>Material and technical support</b></p>	<p>IFNMU is provided with premises for training sessions as well as tests and examinations. Classrooms are equipped with multimedia training tools (provision of multimedia equipment is 44.9%). The disciplines required for education program implementation are provided with appropriate clinical bases, computerized workplaces (3 students per 1 computer), laboratories, equipment, and facilities. The educational process is provided by 13 theoretical and 31 clinical departments. All clinical departments function on the basis of the city’s healthcare facilities, allowing students to learn from hands-on examples, at the bedside, and teachers to be directly involved in providing highly qualified care to the region’s population. The university departments are provided with necessary equipment and facilities, allowing to arrange and give classes at a high methodological and scientific level.</p> <p>The University has a well-equipped training and practical centre “Medicine” which includes 18 educational and practical centres for various functional purposes, where high- tech simulation equipment is applied. University training</p>

	<p>foundation allows organizing and conducting educational classes at the appropriate scientific and methodological level in all academic disciplines.</p> <p>The university has a developed social infrastructure: library, reading rooms, dining facilities, gyms and sports grounds, a medical centre and mental health center. The students are provided with a dormitory.</p>
<p><b>Information and methodological support</b></p>	<p>To give coverage of the information dealing with educational and methodological support, the official website of IFNMU <a href="https://www.ifnmu.edu.ua/">https://www.ifnmu.edu.ua/</a> contains basic information about its activities (structure, licenses and certificates of accreditation, educational / scientific / publishing activities, the University development strategy, Rector’s reports, Quality Management System data, and standard documents on education, research and academic structural units and their staff, list of academic disciplines, admission regulations, public discussion of current issues, and contact information).</p> <p>In order to provide modern interactive information to students and teachers of the university, the technological resources of the Microsoft Office 365 system are used. All computers of IFNMU are 100% covered by type A1 licenses of Microsoft products, and all teachers and students of the University have 100% coverage with licenses of the Microsoft Office 365 product. Also, information capacities are located on cloud servers, with mandatory backups, in particular the official website of the university, LMS Moodle IFNMU, etc.</p> <p>Novel interactive learning technologies are extensively introduced into the educational process of IFNMU: training blocks “virtual patients”, blended learning (e-learning) based on the University “cloud”; interactive learning complex on the basis of EDX-IFNMU; on-line learning (lectures and practical classes), webinars on Microsoft Teams licensed platform, on-line students’ questionnaires and quizzes using Microsoft Forms, case-based learning method using the CASUS platform.</p> <p>Modern electronic learning content (virtual programs, presentations) can be used both for students’ individual work and by means of multimedia equipment at lectures, practical and seminar classes, as well as for students’ distance learning. The University electronic resource contains educational learning materials on all academic disciplines of the curriculum, including the system of distance learning.</p> <p>The IFNMU library is completely provided with domestic and foreign professional periodicals of relevant or related profile,</p>

	<p>including e-forms. The University library collection is annually replenished and meets the students' needs for current domestic and foreign professional periodicals in specialty (including in electronic form). The library has access to field-oriented periodical databases in English and other web resources in specialty. An electronic literature catalogue and register of scientific works of students function to optimize the search for the required literature,</p> <p>Teaching and learning support of the educational process in IFNMU consists of:</p> <p>curriculum and explanatory note to it;</p> <ul style="list-style-type: none"> <li>- work programs, syllabuses, teaching materials for each discipline of the curriculum;</li> <li>- practical training programs, work programs of practical training sessions; banks of test tasks, teaching materials for students for all forms of current and final classes and students' certification.</li> </ul>
<b>9 – Academic Mobility</b>	
<b>National Credit Mobility</b>	<p>The key aspects of the national credit mobility in accordance with Resolution of the Cabinet of Ministers of Ukraine no. 579 “On Approval of the Regulations on the Implementation of the Right to Academic Mobility” <a href="https://zakon.rada.gov.ua/laws/show/579-2015-%D0%BF#Text">https://zakon.rada.gov.ua/laws/show/579-2015-%D0%BF#Text</a> is the right to participate in academic mobility programs to all participants in the educational process; clear definition of types and forms of academic mobility; consolidation of the principle of transferring of the received credits on the basis of the European Credit Transfer System (ECTS). The procedure of academic mobility by all participants in the educational process is an important step in the implementation of the Law of Ukraine “On Higher Education” <a href="https://zakon.rada.gov.ua/laws/show/1556-18#Text">https://zakon.rada.gov.ua/laws/show/1556-18#Text</a> and the creation of effective tools for the internationalization of the Ukrainian higher education institutions.</p> <p>ECTS credits received at other higher educational institutions of Ukraine are transferred in accordance with Regulations on Organization of Educational Process in IFNMU <a href="https://www.ifnm.edu.ua/home/public-information/founding-documents/">https://www.ifnm.edu.ua/home/public-information/founding-documents/</a></p>
<b>International Credit Mobility</b>	<p>International credit mobility involves cooperation with European universities to organize mutual exchanges of students, teachers and administrative staff on projects of international academic mobility. Credit transfer within Erasmus + International Credit Mobility Program is realized on the basis of the Law of Ukraine “On Higher Education”, agreements between IFNMU and higher educational</p>

	institutions of other countries, Regulations on the Organization of Educational Process in IFNMU, Credit Transfer Regulations (personal curriculum) and academic deficiency determination in IFNMU <a href="https://www.ifnmu.edu.ua/home/public-information/founding-documents/">https://www.ifnmu.edu.ua/home/public-information/founding-documents/</a>
<b>Teaching of foreign students</b>	Teaching of foreign students is performed in accordance with the requirements of legislation. Admission to the University is performed in accordance with “Admission Regulations” and taking relevant professional examinations. Ukrainian and English is the medium of instruction depending upon a student’s choice.

## 2. List of Professional Education Program components and their logical consistency

### 2.1. List of Professional Education Program components

Academic discipline code	Education Program components (academic disciplines, practical training sessions)	Number of ECTS credits	Summative assessment form
<b>EP Mandatory Components</b>			
<b>General Training</b>			
MCG 1	Ukrainian Language <sup>1</sup>	3	SMA
MCG 2	History of Ukraine and Ukrainian Culture	3	SMA
MCG 3	Philosophy	3	SMA
MCG 4	Ukrainian / English Language <sup>2</sup>	3	SMA
MCG 5	Latin Language and Medical Terminology	3	SMA
MCG 6	Medical Chemistry	4	SMA
MCG 7	History of Medicine	3	SMA
<b>Total</b>		<b>22</b>	
<b>Professional Training</b>			
MCP 1	Human Anatomy	14	SMA
MCP 2	Histology, Cytology and Embryology	9.5	SMA
MCP 3	Medical Biology	5	SMA
MCP 4	Medical and Biological Physics	5	SMA
MCP 5	Life Safety, Basics of Bioethics and Biosafety	3	SMA
MCP 6	Professional Ukrainian / English language <sup>2</sup>	6	SMA
MCP 7	Physiology	9.5	SMA
MCP 8	Biological and Bioorganic Chemistry	9	SMA
MCP 9	Labour Protection in the Industry	3	SMA
MCP 10	Hygiene and Ecology	8	SMA
MCP 11	Medical informatics	3	SMA
MCP 12	Microbiology, Virology and Immunology	8	SMA
MCP 13	Tactical medicine	8	SMA
MCP 14	Clinical Anatomy and Operative Surgery	3	SMA
MCP 15	Pathomorphology	6	SMA

MCP 16	Pathophysiology	6	SMA
MCP 17	Pharmacology	6	SMA
MCP 18	Propedeutics of Internal Medicine	5	SMA
MCP 19	Propedeutics of Pediatrics	5	SMA
MCP 20	General Surgery	6	SMA
MCP 21	Medical Psychology	3	SMA
MCP 22	Radiology	4	SMA
MCP 23	Social Medicine, Public Health	9	SMA
MCP 24	Integrated Course in Biomedical Disciplines	3	EXAM
MCP 25	Internal Medicine, including:	<b>26</b>	
	Internal Diseases	8	SMA
	Clinical Immunology and Allergology	2	SMA
	Occupational Diseases	1	SMA
	Cardiology	4	SMA
	Hematology	1	SMA
	Pulmonology	2	SMA
	Rheumatology	1.5	SMA
	Gastroenterology	1.5	SMA
	Nephrology	1	SMA
	Medical Emergencies	1	SMA
	Clinical Pharmacology	1.5	SMA
	Medical Genetics	1.5	SMA
MCP 26	Endocrinology	3	SMA
MCP 27	Pediatrics and Childhood Infectious Diseases, including:	<b>14</b>	
	Pediatrics	10.5	SMA
	Childhood Infectious Diseases	3.5	SMA
MCP 28	Surgery, including:	<b>20</b>	
	Surgical Diseases	16	SMA
	Pediatric Surgery	2.5	SMA
	Neurosurgery	1.5	SMA
MCP 29	Obstetrics and Gynecology	10	SMA
MCP 30	Urology	3	SMA
MCP 31	Otorhinolaryngology	3	SMA

MCP 32	Ophthalmology	3	SMA
MCP 33	Neurology	4	SMA
MCP 34	Psychiatry, Narcology and Mental health (mhGAP)	3	SMA
MCP 35	Dermatology, Venereology	3	SMA
MCP 36	Forensic Medicine and Medical Jurisprudence	3	SMA
MCP 37	Physical and Rehabilitation Medicine	3	SMA
MCP 38	Phthisiology	4	SMA
MCP 39	Infectious Diseases	5	SMA
MCP 40	Epidemiology and Principles of Evidence-Based Medicine	3	SMA
MCP 41	Oncology and Radiation Medicine, including:	<b>5</b>	
	Oncology	3.5	SMA
	Radiation Medicine	1.5	SMA
MCP 42	Traumatology and Orthopedics	3	SMA
MCP 43	Anesthesiology and Intensive Care	3	SMA
MCP 44	Military and Emergency Surgery	3	SMA
MCP 45	Emergency and Urgent Medical Care	3	SMA
MCP 46	General Practice (Family Medicine)	3	SMA
MCP 47	Palliative and Hospice Medicine	3	SMA
MCP 48	The Latest Technologies in Medicine	3	Exam
<b>Total</b>		<b>283</b>	
<b>Practical Training Sessions</b>			
<i><b>Mandatory Components of Practical Training</b></i>			
MCPT 1	Patient Care	5	SMA
MCPT 2	Nursing Clinical Placement	5	SMA
MCPT 3	In-Patient Medical Practical Training	4	SMA
MCPT 4	Practical Training in Family Medicine	4	SMA
<b>Total</b>		<b>18</b>	
<i><b>Elective Component of Practical Training 1</b></i>			
ECPT 1.1.	Practical Training	8	SMA
ECPT 1.2.	Clinical Training		
<i><b>Elective Component of Practical Training 2</b></i>			
ECPT 2.1.	Pre-diploma Simulation Practical Training	4	SMA
ECPT 2.2.	Pre-diploma Education and Training Practice		

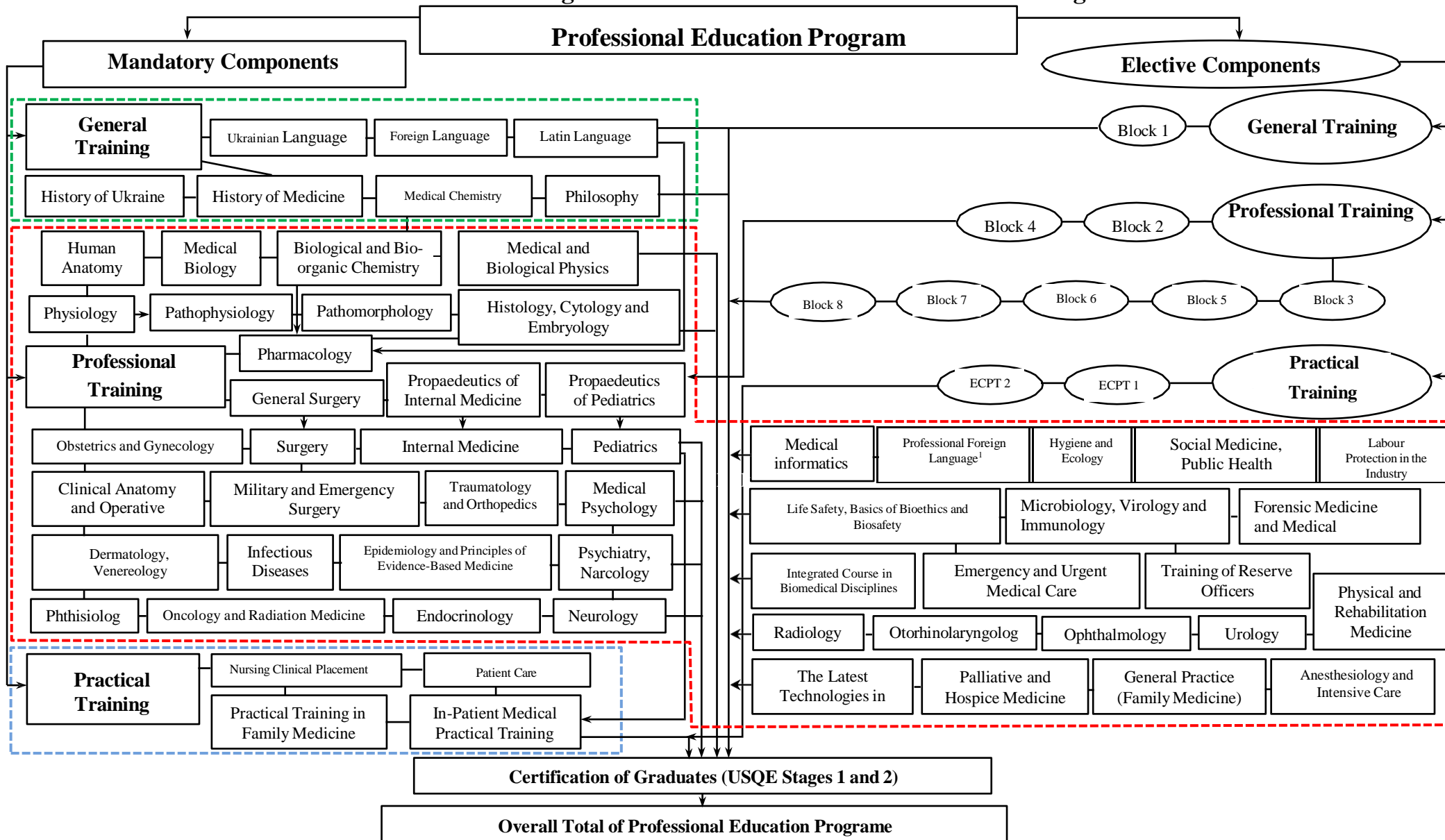
<b>Total</b>		<b>12</b>	
<b>Total amount of practical training</b>		<b>30</b>	
<b>Total amount of mandatory components</b>		<b>335</b>	
<b>List of Elective Components</b>			
<b><i>Block 1</i></b>			
EC 1.1.	Fundamentals of Psychology	3	SMA
EC 1.2.	Communication Psychology		
EC 1.3.	Art Therapy		
EC 1.4.	European Computer Competence Standard		
EC 1.5.	Current Molecular Biology Issues		
EC 1.6.	Speech culture		
EC 1.7.	Personalized Medicine		
EC 1.8.	Corrective Pedagogy		
EC 1.9.	Academic Integrity in Student Environment		
EC 1.10.	Sociology and Medical Sociology		
EC 1.11.	Ethics and Aesthetics in the Medical Field		
<b><i>Block 2</i></b>			
EC 2.1.	Morphological Principles of Cell-Based Therapy	3	SMA
EC 2.2.	Theoretical Foundations of Modern Reproductive Technologies		
EC 2.3.	Modern Cell and Gene Technologies in Medicine		
EC 2.4.	Applied Aspects of Modern Parasitology		
<b><i>Block 3</i></b>			
EC 3.1.	Valeology	3	SMA
EC 3.2.	Morphofunctional Bases of Aesthetic Medicine		
EC 3.3.	Toxic Elements in the Environment and Their Impact on Drinking Water Quality and Human Health		
EC 3.4.	Anti-corruption and Integrity		
EC 3.5.	Medical Ukrainian / English language		
EC 3.6.	Modern Types of Motor Skills		
EC 3.7.	Philosophy of Medicine		
EC 3.8.	Information Hygiene and Critical Thinking		
<b><i>Block 4</i></b>			
EC 4.1.	Physiological Aspects of Endocrinology	3	SMA
EC 4.2.	Basics of Healthy Eating (Diet Therapy)		
EC 4.3.	Clinical Microbiology		
<b><i>Block 5</i></b>			
EC 5.1	Leadership and ethics in professional decision-making		

EC 5.2.	Latin and Greek in Medical Terminology	3	SMA
EC 5.3.	Ukrainian / English language in the field of health care		
EC 5.4.	Nutritiology		
EC 5.5.	Clinical Laboratory Investigation of Internal Organs		
EC 5.6.	Nutritional Biochemistry		
EC 5.7.	Fundamentals of Social Psychology		
EC 5.8.	Health and Physical Activity		
EC 5.9.	Internal Disease Phytotherapy		
EC 5.10.	Surgical Techniques		
EC 5.11.	Forensic Aspects of Recording Traces of Violence		
EC 5.12.	Medical neutrality and international humanitarian law		
EC 5.13.	Effective communication in healthcare		
<b>Block 6</b>			
EC 6.1.	Phytotherapy in Internal Medicine	3	SMA
EC 6.2.	Operative and Urgent Surgical Techniques		
EC 6.3.	Cosmetology		
EC 6.4.	Fundamentals of Smoking, Alcoholism and Substance Addiction Prevention		
EC 6.5.	Ukrainian / English medical terminology		
EC 6.6.	Health Economics		
EC 6.7.	Clinical and Laboratory Examination of Internal Organs		
EC 6.8.	Endoscopic Technologies in Gynecology		
EC 6.9.	Family Planning		
EC 6.10.	Infertile Marriage		
EC 6.11.	Medical cannabis in modern medicine		
EC 6.12.	Course of Survival in Extreme Environments		
EC 6.13.	Fundamentals of Psychoanalysis		
EC 6.14.	Therapeutic Massage		
EC 6.15.	Sports Games, Aerobics		
EC 6.16.	Current Issues of Physiotherapy, Balneology and Rehabilitation		
EC 6.17.	Myths and reality in medicine: a critical analysis from the perspective of clinical pathophysiology		
EC 6.18.	Humanity and empathy		

<b>Block 7</b>		3	SMA
EC 7.1.	Vascular Surgery		
EC 7.2.	Fundamentals of Sexology and Sexopathology		
EC 7.3.	Urgent Issues in Rheumatology		
EC 7.4.	Fundamentals of Reflexotherapy		
EC 7.5.	Autopsy Course		
EC 7.6.	Obstetric Emergencies		
EC 7.7.	Common Surgery Techniques		
EC 7.8.	Professional Ukrainian / English communication		
EC 7.9.	Fundamentals of Dentistry		
EC 7.10.	Medical Genetics		
EC 7.11.	Radiation Medicine		
EC 7.12.	Instrumental Methods of Functional Diagnostics		
EC 7.13.	Urgent Issues in Gastroenterology		
EC 7.14.	Urgent Issues in Pulmonology		
EC 7.15.	Urgent Issues in Neurology		
EC 7.16.	Urgent Issues in Clinical Pathomorphology		
EC 7.17.	Operative Obstetrics		
EC 7.18.	Development of Clinical Thinking in Internal Medicine (according to the CBCR model)		
EC 7.19.	Fundamentals of Ophthalmic Surgery		
EC 7.20.	Endoscopic Technologies in Medicine		
EC 7.21.	Interactive study methods in infectology		
EC 7.22.	Dermato-oncology		
EC 7.23.	Tuberculosis diagnostic algorithm		
EC 7.24.	Climate change		
EC 7.25.	Assistive Technologies in Rehabilitation		
EC 7.26.	Vaccination with the truth: destroying the myths about vaccination		
<b>Block 8</b>			
EC 8.1.	Urgent Issues in Cardiosurgery		
EC 8.2.	Urgent Issues in Hematology and Transfusion Medicine		
EC 8.3.	Urgent Issues in Cardiology		
EC 8.4.	Urgent Issues in Clinical Immunology and Allergology		
EC 8.5.	Urgent Issues in Cerebrovascular Pathology		
EC 8.6.	Professional Ukrainian / English language		
EC 8.7.	Clinical Aspects of Immunoprophylaxis		
EC 8.8.	Clinical Parasitology and Tropical Medicine		
EC 8.9.	Management and Marketing in Health Care		
EC 8.10.	Plastic and Reconstructive Surgery		
EC 8.11.	Modern Aspects of Personal Forensic Identification		
EC 8.12.	Clinical Microbiology, Virology and Immunology		

EC 8.13.	Current problems of pathology in otolaryngology	3	SMA
EC 8.14.	Non-pharmacological Methods of Treatment and Rehabilitation		
EC 8.15.	Selected Issues on Female Reproductive Endocrinology		
EC 8.16.	Organizational Basis of Family Medicine		
EC 8.17.	Fundamentals of Transplantology		
EC 8.18.	Family planning, sexual hygiene in the context of HIV prevention		
EC 8.19.	Extreme Medicine		
EC 8.20.	Urgent Issues in Neurosurgery		
EC 8.21.	Urgent Issues in Nephrology		
EC 8.22.	Functional examination methods in Pulmonology		
EC 8.23.	Recreation and Health Physical Education		
EC 8.24.	Modern Surgical Technologies		
EC 8.25.	Evidence-based Medicine		
EC 8.26.	Emergencies in Obstetrics and Gynecology		
EC 8.27.	Reproductive Health		
EC 8.28.	Infertile Marriage. Assisted Reproductive Technologies		
EC 8.29.	Endoscopic Technologies in Obstetrics and Gynecology		
EC 8.30.	Urologic Emergencies		
EC 8.31.	Andrology		
EC 8.32.	Hygiene of populated areas		
EC 8.33.	Principles of Application of the International Classification of Functioning, Disability and Health		
EC 8.34.	Topical Issues of Polytrauma		
EC 8.35.	Orthopedics in the Age Aspect		
EC 8.36.	Global infectious threats: past, present, future		
<b><i>Elective Component of Practical Training 2</i></b>			
ECPT 2.1.	Pre-diploma Simulation Practical Training	4	SMA
ECPT 2.2.	Pre-diploma Education and Training Practice		
<b>Total amount of Elective disciplines</b>		<b>36</b>	
<b>Non-Credit Components</b>			
NCC 1	Physical Training	320 h	Pass-fail test
<b>Overall total of Education Program components</b>		<b>360</b>	

## 2.2. Structural and logical scheme of the Professional Education Program



### **3. Student Certification Form**

Certification of degree seeking applicants for the second (master) level of higher education according to Professional Education Program in specialty 222 “Medicine” is carried out in the form of the Unified State Qualification Examination (USQE).

The USQE is carried out in accordance with the Procedure of implementation of the Unified State Qualification Examination for master degree trainees in the field of knowledge “Healthcare” and consists of the following components:

- Integrated test-based exam “STEP” (conducted in two test stages – “STEP 1” (the level of professional competence in general (fundamental) disciplines is assessed) and “STEP 2” (the level of professional competence in professionally oriented (clinical) disciplines is assessed), which evaluates conformity of specialists’ training quality to higher education standards and is carried out by the State Organization “Testing Board for Professional Competence Assessment of Higher Education Trainees in Medicine and Pharmacy” at the Ministry of Health of Ukraine;
- Examination in Professional English, which assesses a student’s competence in professional English and is conducted by the Testing Board at the Ministry of Health of Ukraine;
- Objective Structured Practical (Clinical) Examination, which assesses the graduate’s readiness for professional activities in accordance with the requirements of higher education standard by demonstrating practical (clinical) components of professional competence on a real object or model and is conducted by the University Examination Board.

#### **Documents received by a graduate on the basis of successful completion of Professional Education Program**

In accordance with the current legislation of Ukraine, graduates who have successfully completed Professional Education Program and have successfully passed the state certification are awarded master degree in Medicine.

Individuals who demonstrated high academic performance and received at least 75% of excellent (A) grades in all the disciplines and practical training sessions and grades B, C (“good”) in other disciplines as well as passed certification with grades A “excellent”, receive honours master degree in Medicine.

An integral part of master degree in Medicine (honours master degree in Medicine) is DIPLOMA SUPPLEMENT of the European model.

## 4. Matrices of correspondence of program competencies to the Education Program components

### 4.1. Matrix of correspondence of program competencies to the mandatory components of Education Program

Education nal compon ents  Program competen cies	GC 1	GC 2	GC 3	GC 4	GC 5	GC 6	GC 7	GC 8	GC 9	GC 10	GC 11	GC 12	GC 13	GC 14	GC 15	GC 16
	<i>General Competencies</i>															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
MCG 1	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
MCG 2	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
MCG 3	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
MCG 4	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
MCG 5	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
MCG 6	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
MCG 7	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
MCP 1	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
MCP 2	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
MCP 3	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
MCP 4	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
MCP 5	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
MCP 6	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
MCP 7	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
MCP 8	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
MCP 9	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
MCP 10	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
MCP 11	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
MCP 12	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
MCP 13	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
MCP 14	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
MCP 15	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
MCP 16	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
MCP 17	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
MCP 18	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
MCP 19	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
MCP 20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
MCP 21	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
MCP 22	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

MCP 23	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
MCP 24	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
MCP 25	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
MCP 26	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
MCP 27	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
MCP 28	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
MCP 29	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
MCP 30	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
MCP 31	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
MCP 32	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
MCP 33	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
MCP 34	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
MCP 35	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
MCP 36	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
MCP 37	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
MCP 38	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
MCP 39	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
MCP 40	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
MCP 41	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
MCP 42	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
MCP 43	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
MCP 44	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
MCP 45	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
MCP 46	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
MCP 47	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
MCP 48	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
MCPT 1	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
MCPT 2	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
MCPT 3	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
MCPT 4	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

Program competencies Educational components	PC 1	PC 2	PC 3	PC 4	PC 5	PC 6	PC 7	PC 8	PC 9	PC 10	PC 11	PC 12	PC 13	PC 14	PC 15	PC 16	PC 17	PC 18	PC 19	PC 20	PC 21	PC 22	PC 23	PC 24	PC 25		
	<i>Professional Competencies</i>																										
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25		
MCG 1															+												
MCG 2															+												
MCG 3															+												
MCG 4															+												
MCG 5	+															+						+					
MCG 6															+												
MCG 7																							+		+		+
MCP 1																							+		+	+	+
MCP 2																							+		+	+	+
MCP 3																							+		+	+	+
MCP 4																							+		+	+	+
MCP 5						+							+				+					+		+	+	+	+
MCP 6	+												+			+					+	+		+	+	+	+
MCP 7																						+		+	+	+	+
MCP 8																						+		+	+	+	+
MCP 9				+		+							+	+			+				+		+	+	+	+	+
MCP 10				+	+								+			+	+				+	+		+	+	+	+
MCP 11																			+		+		+	+	+	+	+
MCP 12																						+		+	+	+	+
MCP 13									+		+											+		+	+	+	+
MCP 14										+	+											+		+	+	+	+
MCP 15																						+		+	+	+	+
MCP 16																						+		+	+	+	+
MCP 17																						+		+	+	+	+
MCP 18	+	+	+	+	+	+	+	+		+	+					+						+		+	+	+	+
MCP 19	+	+	+	+	+	+	+	+		+	+					+						+		+	+	+	+
MCP 20	+	+	+	+	+	+	+	+		+	+					+						+		+	+	+	+
MCP 21	+	+	+	+	+	+	+	+		+	+					+						+		+	+	+	+
MCP 22	+	+				+					+					+						+		+	+	+	+
MCP 23											+		+		+	+	+	+			+	+	+	+	+	+	+
MCP 24	+	+	+		+	+				+	+					+						+		+	+	+	+
MCP 25	+	+	+	+	+	+	+	+		+	+					+						+		+	+	+	+
MCP 26	+	+	+	+	+	+	+	+		+	+					+						+		+	+	+	+

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
MCP 27	+	+	+	+	+	+	+	+		+	+			+		+					+		+	+	+	
MCP 28	+	+	+	+	+	+	+	+		+	+					+						+		+	+	+
MCP 29	+	+	+	+	+	+	+	+		+	+	+				+						+		+	+	+
MCP 30	+	+	+	+	+	+	+	+		+	+					+						+		+	+	+
MCP 31	+	+	+	+	+	+	+	+		+	+					+						+		+	+	+
MCP 32	+	+	+	+	+	+	+	+		+	+					+						+		+	+	+
MCP 33	+	+	+	+	+	+	+	+		+	+					+						+		+	+	+
MCP 34	+	+	+	+	+	+	+	+		+	+					+						+		+	+	+
MCP 35	+	+	+	+	+	+	+	+		+	+					+						+		+	+	+
MCP 36	+	+	+	+	+	+	+	+			+					+						+		+	+	+
MCP 37	+	+	+			+										+		+				+		+	+	+
MCP 38	+	+	+	+	+	+	+	+		+	+					+						+		+	+	+
MCP 39	+	+	+	+	+	+	+	+	+	+	+														+	+
MCP 40	+	+							+		+			+												
MCP 41	+	+	+	+	+	+	+	+		+	+					+						+		+	+	+
MCP 42	+	+	+	+	+	+	+	+		+	+					+						+		+	+	+
MCP 43	+	+	+	+	+	+	+	+	+	+	+					+						+		+	+	+
MCP 44	+	+	+	+	+	+	+	+		+	+					+						+		+	+	+
MCP 45	+	+	+	+	+	+	+	+		+	+					+						+		+	+	+
MCP 46	+	+	+	+	+	+	+	+		+	+					+	+					+		+	+	+
MCP 47	+	+	+		+	+	+	+		+						+		+				+	+	+	+	+
MCP 48	+	+	+			+	+	+	+		+	+				+	+	+	+	+	+	+	+	+	+	+
MCPT 1										+	+		+			+						+			+	+
MCPT 2										+	+		+			+						+			+	+
MCPT 3	+	+	+	+	+	+	+	+	+	+	+		+	+		+						+			+	+
MCPT 4	+	+	+	+	+	+	+	+	+	+	+		+	+		+						+			+	+

4.2. Matrix of correspondence of program competencies to the elective components of Education Program

Program competencies Educational components	GC1	GC2	GC3	GC4	GC5	GC6	GC7	GC8	GC9	GC10	GC11	GC12	GC13	GC14	GC15	GC16
<i>Professional Competencies</i>																
MCPT 1.1	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
MCPT 1.2	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
MCPT 2.1	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
MCPT 2.1	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
EC 1	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
EC 2	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
EC 3	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
EC 4	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
EC 5	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
EC 6	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
EC 7	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
EC 8	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

Program competencies Educational components	GC1	GC2	GC3	GC4	GC5	GC6	GC7	GC8	GC9	GC10	GC11	GC12	GC13	GC14	GC15	GC16	GC17	GC18	GC19	GC20	GC21	GC22	GC23	GC24	GC25
<i>Professional Competencies</i>																									
MCPT 1.1	+	+	+			+	+	+			+					+		+	+	+	+		+	+	+
MCPT 1.2	+	+	+			+	+	+			+					+		+	+	+	+		+	+	+
MCPT 2.1	+	+	+			+	+	+	+	+	+			+				+			+		+	+	+
MCPT 2.1	+	+	+			+	+	+	+	+	+			+				+			+		+	+	+
EC 1																					+		+		+
EC 2		+										+									+		+	+	+
EC 3					+						+			+			+				+		+		+
EC 4		+		+	+						+			+		+					+		+	+	+
EC 5	+	+	+		+	+					+					+					+		+	+	+
EC 6	+	+	+			+			+	+	+	+				+		+	+	+	+		+	+	+
EC 7	+	+	+			+	+	+		+	+	+				+		+			+		+	+	+
EC 8	+	+	+			+	+	+	+	+	+	+		+		+		+	+	+	+	+	+	+	+

## Matrices providing Program Learning Outcomes (PLO) with relevant EP components

### 5.1. Matrix providing Program Learning Outcomes (PLO) with mandatory components of the Education Program

Програмні результати навчання	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5	PLO 6	PLO 7	PLO 8	PLO 9	PLO 10	PLO 11	PLO 12	PLO 13	PLO 14	PLO 15	PLO 16	PLO 17	PLO 18	PLO 19	PLO 20	PLO 21	PLO 22	PLO 23	PLO 24	PLO 25	PLO 26	PLO 27	PLO 28	PLO 29	
Освітні компоненти	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	
MCG 1	+	+	+																		+	+		+	+		+			
MCG 2	+	+	+																			+	+		+	+		+		
MCG 3	+	+	+																											
MCG 4																														
MCG 5	+	+	+																			+	+		+	+		+		
MCG 6																						+	+		+	+		+		
MCG 7	+	+	+																			+	+		+	+		+		
MCP 1	+	+	+																			+	+		+	+		+		
MCP 2	+	+	+																			+	+		+	+		+		
MCP 3	+	+	+																			+	+		+	+		+		
MCP 4	+	+	+																			+	+		+	+		+		
MCP 5	+	+	+																		+	+	+	+	+		+		+	+
MCP 6	+		+																	+		+	+			+		+		+
MCP 7	+	+	+																			+	+		+	+		+		
MCP 8	+	+	+																			+	+		+	+		+		
MCP 9	+	+	+							+												+	+	+		+		+		
MCP 10	+	+	+							+					+							+	+	+	+	+	+	+	+	
MCP 11	+	+	+																			+	+			+		+		
MCP 12	+	+	+																			+	+			+		+		
MCP 13	+	+	+												+	+						+	+	+		+		+		
MCP 14	+	+	+															+				+	+			+		+		
MCP 15	+	+	+																			+	+		+	+		+		
MCP 16	+	+	+																			+	+		+	+		+		
MCP 17	+	+	+																			+	+		+	+		+		
MCP 18	+	+	+	+	+	+	+	+	+	+				+	+	+	+	+				+	+		+	+	+	+	+	
MCP 19	+	+	+	+	+	+	+	+	+	+				+	+	+	+	+	+			+	+		+	+	+	+	+	
MCP 20	+	+	+	+	+	+	+	+	+	+				+	+	+	+	+	+			+	+		+	+	+	+	+	
MCP 21	+	+	+	+	+	+	+	+	+	+				+	+	+	+	+	+			+	+		+	+	+	+	+	

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
MCP 22	+	+	+	+			+	+	+							+	+	+			+	+			+		+		
MCP 23	+	+	+													+		+			+	+	+			+	+	+	
MCP 24	+	+	+	+															+	+	+	+			+		+		
MCP 25	+	+	+	+	+	+	+	+	+	+				+	+	+	+	+			+	+	+	+	+	+	+	+	+
MCP 26	+	+	+	+	+	+	+	+	+	+				+	+	+	+	+			+	+		+	+	+	+	+	+
MCP 27	+	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+			+	+		+	+	+	+	+	+
MCP 28	+	+	+	+	+	+	+	+	+	+		+		+	+	+	+	+			+	+		+	+	+	+	+	+
MCP 29	+	+	+	+	+	+	+	+	+	+	+	+		+	+	+	+	+			+	+		+	+	+	+	+	+
MCP 30	+	+	+	+	+	+	+	+	+	+				+	+	+	+	+			+	+		+	+	+	+	+	+
MCP 31	+	+	+	+	+	+	+	+	+	+				+	+	+	+	+			+	+		+	+	+	+	+	+
MCP 32	+	+	+	+	+	+	+	+	+	+				+	+	+	+	+			+	+		+	+	+	+	+	+
MCP 33	+	+	+	+	+	+	+	+	+	+				+	+	+	+	+			+	+		+	+	+	+	+	+
MCP 34	+	+	+	+	+	+	+	+	+	+				+	+	+	+	+			+	+		+	+	+	+	+	+
MCP 35	+	+	+	+	+	+	+	+	+	+				+	+	+	+	+			+	+		+	+	+	+	+	+
MCP 36	+	+	+	+	+	+	+	+	+	+				+	+	+	+	+			+	+		+	+	+	+	+	+
MCP 37	+	+	+			+	+									+	+	+			+	+			+		+		
MCP 38	+	+	+	+	+	+	+	+	+	+				+	+	+	+	+			+	+		+	+	+	+	+	+
MCP 39	+	+	+	+	+	+	+	+	+	+				+	+		+							+					
MCP 40	+				+															+				+					+
MCP 41	+	+	+	+	+	+	+	+	+	+				+	+	+	+	+			+	+		+	+	+	+	+	+
MCP 42	+	+	+	+	+	+	+	+	+	+				+	+	+	+	+	+	+	+		+	+	+	+	+	+	+
MCP 43	+	+	+	+	+	+	+	+	+	+				+	+	+	+	+			+	+		+	+	+	+	+	+
MCP 44	+	+	+	+	+	+	+	+	+	+				+	+	+	+	+			+	+		+	+	+	+	+	+
MCP 45	+	+	+	+	+	+	+	+	+	+				+	+	+	+	+			+	+		+	+	+	+	+	+
MCP 46	+	+	+	+	+	+	+	+	+	+				+	+	+	+	+			+	+		+	+	+	+	+	+
MCP 47	+	+	+	+	+	+				+						+	+	+			+	+			+	+	+		
MCP 48	+	+	+	+	+	+	+	+	+	+	+	+				+	+	+			+	+			+		+	+	+
MCPT 1	+	+	+													+	+				+	+		+	+	+	+	+	
MCPT 2	+	+	+													+	+				+	+		+	+	+	+	+	
MCPT 3	+	+	+	+	+	+	+	+	+	+	+	+				+	+				+	+		+	+	+	+	+	+
MCPT 4	+	+	+	+	+	+	+	+	+	+	+	+	+			+	+				+	+		+	+	+	+	+	+

## 5.2. Matrix providing Program Learning Outcomes (PLO) with elective components of the Education Program

Програмні результати навчання	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5	PLO 6	PLO 7	PLO 8	PLO 9	PLO 10	PLO 11	PLO 12	PLO 13	PLO 14	PLO 15	PLO 16	PLO 17	PLO 18	PLO 19	PLO 20	PLO 21	PLO 22	PLO 23	PLO 24	PLO 25	PLO 26	PLO 27	PLO 28	PLO 29
Освітні компоненти	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
МСРТ 1.1	+	+	+	+		+	+	+	+		+	+	+	+		+	+	+	+	+	+								
МСРТ 1.2	+	+	+	+		+	+	+	+		+	+	+	+		+	+	+	+	+	+								
МСРТ 2.1	+	+	+	+	+	+	+									+	+	+			+	+			+		+		
МСРТ 2.1	+	+	+	+	+	+	+									+	+	+			+	+			+		+		
ЕС 1	+	+	+																		+	+			+		+		
ЕС 2	+	+	+																+	+	+	+			+		+		
ЕС 3	+	+	+											+	+				+	+	+	+			+		+		
ЕС 4	+	+	+	+						+											+	+	+		+		+		
ЕС 5	+	+	+	+		+	+									+	+	+			+	+			+		+		
ЕС 6	+	+	+			+	+				+	+	+			+	+	+			+	+			+		+		
ЕС 7	+	+	+	+	+	+	+	+	+	+	+	+	+	+		+	+	+			+	+			+		+		+
ЕС 8	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		+	+	+	+		+

**MATRIX OF CORRESPONDENCE  
OF STANDARD-BASED LEARNING OUTCOMES AND COMPETENCIES  
VERSUS EDUCATIONAL PROGRAM COMPONENTS**

	<b>General Competencies</b>	<b>Professional Competencies</b>	<b>Program Learning Outcome</b>
<b>MCG 1</b>	<i>GC1, GC2, GC3, GC4, GC5, GC6, GC7, GC8, GC9, GC10, GC11, GC12, GC13, GC14, GC15, GC16</i>	<i>PC15</i>	<i>PL1, PL2, PL3, PL21, PL22, PL24, PL25, PL27</i>
<b>MCG 2</b>	<i>GC1, GC2, GC3, GC4, GC5, GC6, GC7, GC8, GC9, GC10, GC11, GC12, GC13, GC14, GC15, GC16</i>	<i>PC15</i>	<i>PL1, PL2, PL3, PL21, PL22, PL24, PL25, PL27</i>
<b>MCG 3</b>	<i>GC1, GC2, GC3, GC4, GC5, GC6, GC7, GC8, GC9, GC10, GC11, GC12, GC13, GC14, GC15, GC16</i>	<i>PC15,</i>	<i>PL1, PL2, PL3,</i>
<b>MCG 4</b>	<i>GC1, GC2, GC3, GC4, GC5, GC6, GC7, GC8, GC9, GC10, GC11, GC12, GC13, GC14, GC15, GC16</i>	<i>PC15</i>	<i>PL21, PL22, PL24, PL25, PL27</i>
<b>MCG 5</b>	<i>GC1, GC2, GC3, GC4, GC5, GC6, GC7, GC8, GC9, GC10, GC11, GC12, GC13, GC14, GC15, GC16</i>	<i>PC1, PC16, PC 21</i>	<i>PL1, PL2, PL3,</i>
<b>MCG 6</b>	<i>GC1, GC2, GC3, GC4, GC5, GC6, GC7, GC8, GC9, GC10, GC11, GC12, GC13, GC14, GC15, GC16</i>	<i>PC15</i>	<i>PL21, PL22, PL24, PL25, PL27</i>
<b>MCG 7</b>	<i>GC1, GC2, GC3, GC4, GC5, GC6, GC7, GC8, GC9, GC10, GC11, GC12, GC13, GC14, GC15, GC16</i>	<i>PC21, PC23, PC25</i>	<i>PL1, PL2, PL3, PL21, PL25, PL27</i>
<b>MCP 1</b>	<i>GC1, GC2, GC3, GC4, GC5, GC6, GC7, GC8, GC9, GC10, GC11, GC12, GC13, GC14, GC15, GC16</i>	<i>PC21, PC23, PC24, PC25</i>	<i>PL1, PL2, PL3, PL21, PL22, PL24, PL25, PL27</i>
<b>MCP 2</b>	<i>GC1, GC2, GC3, GC4, GC5, GC6, GC7, GC8, GC9, GC10, GC11, GC12, GC13, GC14, GC15, GC16</i>	<i>PC21, PC23, PC24, PC25</i>	<i>PL1, PL2, PL3, PL21, PL22, PL24, PL25, PL27</i>

<b>MCP 3</b>	<i>GC1, GC2, GC3, GC4, GC5, GC6, GC7, GC8, GC9, GC10, GC11, GC12, GC13, GC14, GC15, GC16</i>	<i>PC21, PC23, PC24, PC25</i>	<i>PL1, PL2, PL3, PL21, PL22, PL24, PL25, PL27</i>
<b>MCP 4</b>	<i>GC1, GC2, GC3, GC4, GC5, GC6, GC7, GC8, GC9, GC10, GC11, GC12, GC13, GC14, GC15, GC16</i>	<i>PC21, PC23, PC25</i>	<i>PL1, PL2, PL3, PL21, PL22, PL25, PL27</i>
<b>MCP 5</b>	<i>GC1, GC2, GC3, GC4, GC5, GC6, GC7, GC8, GC9, GC10, GC11, GC12, GC13, GC14, GC15, GC16</i>	<i>PC6, PC13, PC17, PC21, PC23, PC24, PC25</i>	<i>PL1, PL2, PL3, PL19, PL20, PL21, PL22, PL23, PL24, PL25, PL27, PL29</i>
<b>MCP 6</b>	<i>GC1, GC2, GC3, GC4, GC5, GC6, GC7, GC8, GC9, GC10, GC11, GC12, GC13, GC14, GC15, GC16</i>	<i>PC1, PC13, PC16, PC20, PC21, PC25</i>	<i>PL1, PL2, PL3, PL21, PL22, PL25, PL27</i>
<b>MCP 7</b>	<i>GC1, GC2, GC3, GC4, GC5, GC6, GC7, GC8, GC9, GC10, GC11, GC12, GC13, GC14, GC15, GC16</i>	<i>PC21, PC23, PC24, PC25</i>	<i>PL1, PL2, PL3, PL21, PL22, PL24, PL25, PL27</i>
<b>MCP 8</b>	<i>GC1, GC2, GC3, GC4, GC5, GC6, GC7, GC8, GC9, GC10, GC11, GC12, GC13, GC14, GC15, GC16</i>	<i>PC21, PC23, PC24, PC25</i>	<i>PL1, PL2, PL3, PL21, PL22, PL24, PL25, PL27</i>
<b>MCP 9</b>	<i>GC1, GC2, GC3, GC4, GC5, GC6, GC7, GC8, GC9, GC10, GC11, GC12, GC13, GC14, GC15, GC16</i>	<i>PC4, PC6, PC13, PC14, PC17, PC21, PC23, PC25</i>	<i>PL1, PL2, PL3, PL10, PL21, PL22, PL23, PL25, PL27</i>
<b>MCP 10</b>	<i>GC1, GC2, GC3, GC4, GC5, GC6, GC7, GC8, GC9, GC10, GC11, GC12, GC13, GC14, GC15, GC16</i>	<i>PC4, PC5, PC13, PC16, PC17, PC21, PC23, PC25</i>	<i>PL1, PL2, PL3, PL10, PL15, PL21, PL22, PL23, PL24, PL25, PL26, PL27</i>
<b>MCP 11</b>	<i>GC1, GC2, GC3, GC4, GC5, GC6, GC7, GC8, GC9, GC10, GC11, GC12, GC13, GC14, GC15, GC16</i>	<i>PC18, PC20, PC21, PC23, PC25</i>	<i>PL1, PL2, PL3, PL21, PL22, PL25, PL27</i>
<b>MCP 12</b>	<i>GC1, GC2, GC3, GC4, GC5, GC6, GC7, GC8, GC9, GC10, GC11, GC12, GC13, GC14, GC15, GC16</i>	<i>PC21, PC23, PC24, PC25</i>	<i>PL1, PL2, PL3, PL21, PL22, PL24, PL25, PL27</i>
<b>MCP 13</b>	<i>GC1, GC2, GC3, GC4, GC5, GC6, GC7, GC8, GC9, GC10, GC11, GC12, GC13, GC14, GC15, GC16</i>	<i>PC9, PC11, PC21, PC23, PC25</i>	<i>PL1, PL2, PL3, PL14, PL15, PL21, PL22, PL23, PL25, PL27</i>
<b>MCP 14</b>	<i>GC1, GC2, GC3, GC4, GC5, GC6, GC7, GC8, GC9, GC10, GC11, GC12,</i>	<i>PC10, PC11, PC21, PC23, PC24, PC25</i>	<i>PL1, PL2, PL3, PL17, PL21, PL22, PL25, PL27</i>

	<i>GC13, GC14, GC15, GC16</i>		
<b>MCP 15</b>	<i>GC1, GC2, GC3, GC4, GC5, GC6, GC7, GC8, GC9, GC10, GC11, GC12, GC13, GC14, GC15, GC16</i>	<i>PC21, PC23, PC24, PC25</i>	<i>PL1, PL2, PL3, PL21, PL22, PL24, PL25, PL27</i>
<b>MCP 16</b>	<i>GC1, GC2, GC3, GC4, GC5, GC6, GC7, GC8, GC9, GC10, GC11, GC12, GC13, GC14, GC15, GC16</i>	<i>PC21, PC23, PC24, PC25</i>	<i>PL1, PL2, PL3, PL21, PL22, PL24, PL25, PL27</i>
<b>MCP 17</b>	<i>GC1, GC2, GC3, GC4, GC5, GC6, GC7, GC8, GC9, GC10, GC11, GC12, GC13, GC14, GC15, GC16</i>	<i>PC21, PC23, PC24, PC25</i>	<i>PL1, PL2, PL3, PL21, PL22, PL24, PL25, PL27</i>
<b>MCP 18</b>	<i>GC1, GC2, GC3, GC4, GC5, GC6, GC7, GC8, GC9, GC10, GC11, GC12, GC13, GC14, GC15, GC16</i>	<i>PC1, PC2, PC3, PC4, PC5, PC6, PC7, PC8, PC10, PC11, PC16, PC21, PC23, PC24, PC25</i>	<i>PL1, PL2, PL3, PL4, PL5, PL6, PL7, PL8, PL9, PL10, PL14, PL15, PL16, PL17, PL18, PL21, PL22, PL24, PL25, PL26, PL27, PL28</i>
<b>MCP 19</b>	<i>GC1, GC2, GC3, GC4, GC5, GC6, GC7, GC8, GC9, GC10, GC11, GC12, GC13, GC14, GC15, GC16</i>	<i>PC1, PC2, PC3, PC4, PC5, PC6, PC7, PC8, PC10, PC11, PC16, PC21, PC23, PC24, PC25</i>	<i>PL1, PL2, PL3, PL4, PL5, PL6, PL7, PL8, PL9, PL10, PL14, PL15, PL16, PL17, PL18, PL21, PL22, PL24, PL25, PL26, PL27, PL28</i>
<b>MCP 20</b>	<i>GC1, GC2, GC3, GC4, GC5, GC6, GC7, GC8, GC9, GC10, GC11, GC12, GC13, GC14, GC15, GC16</i>	<i>PC1, PC2, PC3, PC4, PC5, PC6, PC7, PC8, PC10, PC11, PC16, PC21, PC23, PC24, PC25</i>	<i>PL1, PL2, PL3, PL4, PL5, PL6, PL7, PL8, PL9, PL10, PL14, PL15, PL16, PL17, PL18, PL21, PL22, PL24, PL25, PL26, PL27, PL28</i>
<b>MCP 21</b>	<i>GC1, GC2, GC3, GC4, GC5, GC6, GC7, GC8, GC9, GC10, GC11, GC12, GC13, GC14, GC15, GC16</i>	<i>PC1, PC2, PC3, PC4, PC5, PC6, PC7, PC8, PC10, PC11, PC16, PC21, PC23, PC24, PC25</i>	<i>PL1, PL2, PL3, PL4, PL5, PL6, PL7, PL8, PL9, PL10, PL14, PL15, PL16, PL17, PL18, PL21, PL22, PL24, PL25, PL26, PL27, PL28</i>
<b>MCP 22</b>	<i>GC1, GC2, GC3, GC4, GC5, GC6, GC7, GC8, GC9, GC10, GC11, GC12, GC13, GC14, GC15, GC16</i>	<i>PC1, PC2, PC6, PC11, PC16, PC21, PC23, PC24, PC25</i>	<i>PL1, PL2, PL3, PL4, PL7, PL8, PL9, PL16, PL17, PL18, PL21, PL22, PL25, PL27</i>
<b>MCP 23</b>	<i>GC1, GC2, GC3, GC4, GC5, GC6, GC7, GC8, GC9, GC10, GC11, GC12, GC13, GC14, GC15, GC16,</i>	<i>PC11, PC13, PC15, PC16, PC17, PC18, PC20, PC21, PC22, PC23, PC25</i>	<i>PL1, PL2, PL3, PL16, PL18, PL21, PL22, PL26, PL27, PL28</i>
<b>MCP 24</b>	<i>GC1, GC2, GC3, GC4, GC5, GC6, GC7, GC8, GC9, GC10, GC11, GC12, GC13, GC14, GC15, GC16</i>	<i>PC1, PC2, PC3, PC5, PC6, PC10, PC11, PC16, PC21, PC23, PC24, PC25</i>	<i>PL1, PL2, PL3, PL4, PL19, PL20, PL21, PL22, PL25, PL27</i>
<b>MCP 25</b>	<i>GC1, GC2, GC3, GC4, GC5, GC6, GC7, GC8, GC9, GC10, GC11, GC12, GC13, GC14, GC15, GC16</i>	<i>PC1, PC2, PC3, PC4, PC5, PC6, PC7, PC8, PC10, PC11, PC16, PC23, PC24, PC25</i>	<i>PL1, PL2, PL3, PL4, PL5, PL6, PL7, PL8, PL9, PL10, PL14, PL15, PL16, PL17, PL18, PL21, PL22, PL23, PL24, PL25, PL26, PL27, PL28</i>

<b>MCP 26</b>	<i>GC1, GC2, GC3, GC4, GC5, GC6, GC7, GC8, GC9, GC10, GC11, GC12, GC13, GC14, GC15, GC16</i>	<i>PC1, PC2, PC3, PC4, PC5, PC6, PC7, PC8, PC10, PC11, PC16, PC21, PC23, PC24, PC25</i>	<i>PL1, PL2, PL3, PL4, PL5, PL6, PL7, PL8, PL9, PL10, PL14, PL15, PL16, PL17, PL18, PL21, PL22, PL24, PL25, PL26, PL27, PL28</i>
<b>MCP 27</b>	<i>GC1, GC2, GC3, GC4, GC5, GC6, GC7, GC8, GC9, GC10, GC11, GC12, GC13, GC14, GC15, GC16</i>	<i>PC1, PC2, PC3, PC4, PC5, PC6, PC7, PC8, PC10, PC11, PC14, PC16, PC21, PC23, PC24, PC25</i>	<i>PL1, PL2, PL3, PL4, PL5, PL6, PL7, PL8, PL9, PL10, PL 12, PL 13, PL14, PL15, PL16, PL17, PL18, PL21, PL22, PL24, PL25, PL26, PL27, PL28, PL 29</i>
<b>MCP 28</b>	<i>GC1, GC2, GC3, GC4, GC5, GC6, GC7, GC8, GC9, GC10, GC11, GC12, GC13, GC14, GC15, GC16</i>	<i>PC1, PC2, PC3, PC4, PC5, PC6, PC7, PC8, PC10, PC11, PC16, PC21, PC23, PC24, PC25</i>	<i>PL1, PL2, PL3, PL4, PL5, PL6, PL7, PL8, PL9, PL10, PL 12, PL14, PL15, PL16, PL17, PL18, PL21, PL22, PL24, PL25, PL26, PL27, PL28</i>
<b>MCP 29</b>	<i>GC1, GC2, GC3, GC4, GC5, GC6, GC7, GC8, GC9, GC10, GC11, GC12, GC13, GC14, GC15, GC16</i>	<i>PC1, PC2, PC3, PC4, PC5, PC6, PC7, PC8, PC10, PC11, PC12, PC16, PC21, PC23, PC24, PC25</i>	<i>PL1, PL2, PL3, PL4, PL5, PL6, PL7, PL8, PL9, PL10, PL 11, PL 12, PL14, PL15, PL16, PL17, PL18, PL21, PL22, PL24, PL25, PL26, PL27, PL28</i>
<b>MCP 30</b>	<i>GC1, GC2, GC3, GC4, GC5, GC6, GC7, GC8, GC9, GC10, GC11, GC12, GC13, GC14, GC15, GC16</i>	<i>PC1, PC2, PC3, PC4, PC5, PC6, PC7, PC8, PC10, PC11, PC16, PC21, PC23, PC24, PC25</i>	<i>PL1, PL2, PL3, PL4, PL5, PL6, PL7, PL8, PL9, PL10, PL14, PL15, PL16, PL17, PL18, PL21, PL22, PL24, PL25, PL26, PL27, PL28</i>
<b>MCP 31</b>	<i>GC1, GC2, GC3, GC4, GC5, GC6, GC7, GC8, GC9, GC10, GC11, GC12, GC13, GC14, GC15, GC16</i>	<i>PC1, PC2, PC3, PC4, PC5, PC6, PC7, PC8, PC10, PC11, PC16, PC21, PC23, PC24, PC25</i>	<i>PL1, PL2, PL3, PL4, PL5, PL6, PL7, PL8, PL9, PL10, PL14, PL15, PL16, PL17, PL18, PL21, PL22, PL24, PL25, PL26, PL27, PL28,</i>
<b>MCP 32</b>	<i>GC1, GC2, GC3, GC4, GC5, GC6, GC7, GC8, GC9, GC10, GC11, GC12, GC13, GC14, GC15, GC16</i>	<i>PC1, PC2, PC3, PC4, PC5, PC6, PC7, PC8, PC10, PC11, PC16, PC21, PC23, PC24, PC25</i>	<i>PL1, PL2, PL3, PL4, PL5, PL6, PL7, PL8, PL9, PL10, PL14, PL15, PL16, PL17, PL18, PL21, PL22, PL24, PL25, PL26, PL27, PL28,</i>
<b>MCP 33</b>	<i>GC1, GC2, GC3, GC4, GC5, GC6, GC7, GC8, GC9, GC10, GC11, GC12, GC13, GC14, GC15, GC 16</i>	<i>PC1, PC2, PC3, PC4, PC5, PC6, PC7, PC8, PC10, PC11, PC16, PC21, PC23, PC24, PC25</i>	<i>PL1, PL2, PL3, PL4, PL5, PL6, PL7, PL8, PL9, PL10, PL14, PL15, PL16, PL17, PL18, PL21, PL22, PL24, PL25, PL26, PL27, PL28,</i>

<b>MCP 34</b>	<i>GC1, GC2, GC3, GC4, GC5, GC6, GC7, GC8, GC9, GC10, GC11, GC12, GC13, GC14, GC15, GC16</i>	<i>PC1, PC2, PC3, PC4, PC5, PC6, PC7, PC8, PC10, PC11, PC16, PC21, PC23, PC24, PC25</i>	<i>PL1, PL2, PL3, PL4, PL5, PL6, PL7, PL8, PL9, PL10, PL14, PL15, PL16, PL17, PL18, PL21, PL22, PL24, PL25, PL26, PL27, PL28,</i>
<b>MCP 35</b>	<i>GC1, GC2, GC3, GC4, GC5, GC6, GC7, GC8, GC9, GC10, GC11, GC12, GC13, GC14, GC15, GC16</i>	<i>PC1, PC2, PC3, PC4, PC5, PC6, PC7, PC8, PC10, PC11, PC16, PC21, PC23, PC24, PC25</i>	<i>PL1, PL2, PL3, PL4, PL5, PL6, PL7, PL8, PL9, PL10, PL14, PL15, PL16, PL17, PL18, PL21, PL22, PL24, PL25, PL26, PL27, PL28,</i>
<b>MCP 36</b>	<i>GC1, GC2, GC3, GC4, GC5, GC6, GC7, GC8, GC9, GC10, GC11, GC12, GC13, GC14, GC15, GC16</i>	<i>PC1, PC2, PC3, PC4, PC5, PC6, PC7, PC8, PC11, PC16, PC21, PC23, PC24, PC25</i>	<i>PL1, PL2, PL3, PL4, PL5, PL6, PL7, PL8, PL9, PL10, PL14, PL15, PL16, PL17, PL18, PL21, PL22, PL24, PL25, PL26, PL27, PL28,</i>
<b>MCP 37</b>	<i>GC1, GC2, GC3, GC4, GC5, GC6, GC7, GC8, GC9, GC10, GC11, GC12, GC13, GC14, GC15, GC16</i>	<i>PC1, PC2, PC3, PC6, PC16, PC18, PC21, PC23, PC24, PC25</i>	<i>PL1, PL2, PL3, PL6, PL7, PL16, PL17, PL18, PL21, PL22, PL25, PL27</i>
<b>MCP 38</b>	<i>GC1, GC2, GC3, GC4, GC5, GC6, GC7, GC8, GC9, GC10, GC11, GC12, GC13, GC14, GC15, GC16</i>	<i>PC1, PC2, PC3, PC4, PC5, PC6, PC7, PC8, PC10, PC11, PC16, PC21, PC23, PC24, PC25</i>	<i>PL1, PL2, PL3, PL4, PL5, PL6, PL7, PL8, PL9, PL10, PL14, PL15, PL16, PL17, PL18, PL21, PL22, PL24, PL25, PL26, PL27, PL28,</i>
<b>MCP 39</b>	<i>GC1, GC2, GC3, GC4, GC5, GC6, GC7, GC8, GC9, GC10, GC11, GC12, GC13, GC14, GC15, GC16</i>	<i>PC1, PC2, PC3, PC4, PC5, PC6, PC7, PC8, PC9, PC10, PC11, PC24, PC25</i>	<i>PL1, PL2, PL3, PL4, PL5, PL6, PL7, PL8, PL9, PL10, PL14, PL15, PL17, PL24</i>
<b>MCP 40</b>	<i>GC1, GC2, GC3, GC4, GC5, GC6, GC7, GC8, GC9, GC10, GC11, GC12, GC13, GC14, GC15, GC16</i>	<i>PC1, PC2, PC9, PC11, PC14</i>	<i>PL1, PL5, PL20, PL24, PL29</i>
<b>MCP 41</b>	<i>GC1, GC2, GC3, GC4, GC5, GC6, GC7, GC8, GC9, GC10, GC11, GC12, GC13, GC14, GC15, GC16</i>	<i>PC1, PC2, PC3, PC4, PC5, PC6, PC7, PC8, PC10, PC11, PC16, PC21, PC23, PC24, PC25</i>	<i>PL1, PL2, PL3, PL4, PL5, PL6, PL7, PL8, PL9, PL10, PL14, PL15, PL16, PL17, PL18, PL20, PL21, PL22, PL24, PL25, PL26, PL27, PL29</i>
<b>MCP 42</b>	<i>GC1, GC2, GC3, GC4, GC5, GC6, GC7, GC8, GC9, GC10, GC11, GC12, GC13, GC14, GC15, GC16</i>	<i>PC1, PC2, PC3, PC4, PC5, PC6, PC7, PC8, PC10, PC11, PC16, PC21, PC23, PC24, PC25</i>	<i>PL1, PL2, PL3, PL4, PL5, PL6, PL7, PL8, PL9, PL10, PL14, PL15, PL16, PL17, PL18, PL19, PL21, PL22, PL24, PL25, PL26, PL27, PL28</i>

<b>MCP 43</b>	<i>GC1, GC2, GC3, GC4, GC5, GC6, GC7, GC8, GC9, GC10, GC11, GC12, GC13, GC14, GC15, GC16</i>	<i>PC1, PC2, PC3, PC4, PC5, PC6, PC7, PC8, PC9, PC10, PC11, PC16, PC21, PC23, PC24, PC25</i>	<i>PL1, PL2, PL3, PL4, PL5, PL6, PL7, PL8, PL9, PL10, PL14, PL15, PL16, PL17, PL18, PL21, PL22, PL24, PL25, PL26, PL27, PL28,</i>
<b>MCP 44</b>	<i>GC1, GC2, GC3, GC4, GC5, GC6, GC7, GC8, GC9, GC10, GC11, GC12, GC13, GC14, GC15, GC16</i>	<i>PC1, PC2, PC3, PC4, PC5, PC6, PC7, PC8, PC10, PC11, PC16, PC21, PC23, PC24, PC25</i>	<i>PL1, PL2, PL3, PL4, PL5, PL6, PL7, PL8, PL9, PL10, PL14, PL15, PL16, PL17, PL18, PL21, PL22, PL24, PL25, PL26, PL27, PL28,</i>
<b>MCP 45</b>	<i>GC1, GC2, GC3, GC4, GC5, GC6, GC7, GC8, GC9, GC10, GC11, GC12, GC13, GC14, GC15, GC16</i>	<i>PC1, PC2, PC3, PC4, PC5, PC6, PC7, PC8, PC10, PC11, PC16, PC21, PC23, PC24, PC25</i>	<i>PL1, PL2, PL3, PL4, PL5, PL6, PL7, PL8, PL9, PL10, PL14, PL15, PL16, PL17, PL18, PL21, PL22, PL24, PL25, PL26, PL27, PL28,</i>
<b>MCP 46</b>	<i>GC1, GC2, GC3, GC4, GC5, GC6, GC7, GC8, GC9, GC10, GC11, GC12, GC13, GC14, GC15, GC16</i>	<i>PC1, PC2, PC3, PC4, PC5, PC6, PC7, PC8, PC10, PC11, PC16, PC17, PC21, PC23, PC24, PC25</i>	<i>PL1, PL2, PL3, PL4, PL5, PL6, PL7, PL8, PL9, PL10, PL14, PL15, PL16, PL17, PL18, PL21, PL22, PL24, PL25, PL26, PL27, PL28</i>
<b>MCP 47</b>	<i>GC1, GC2, GC3, GC4, GC5, GC6, GC7, GC8, GC9, GC10, GC11, GC12, GC13, GC14, GC15, GC16</i>	<i>PC1, PC2, PC3, PC5, PC6, PC7, PC8, PC10, PC16, PC18, PC21, PC22, PC23, PC24, PC25</i>	<i>PL1, PL2, PL3, PL4, PL5, PL6, PL10, PL16, PL17, PL18, PL21, PL22, PL25, PL 26, PL27</i>
<b>MCP 48</b>	<i>GC1, GC2, GC3, GC4, GC5, GC6, GC7, GC8, GC9, GC10, GC11, GC12, GC13, GC14, GC15, GC16</i>	<i>PC1, PC2, PC3, PC6, PC7, PC8, PC9, PC11, PC12, PC16, PC17, PC18, PC19, PC20, PC21, PC22, PC23, PC24, PC25</i>	<i>PL1, PL2, PL3, PL4, PL5, PL6, PL7, PL8, PL9, PL10, PL11, PL12, PL13, PL16, PL17, PL18, PL21, PL22, PL25, PL27, PL28, PL29</i>
<b>MCPT 1</b>	<i>GC1, GC2, GC3, GC4, GC5, GC6, GC7, GC8, GC9, GC10, GC11, GC12, GC13, GC14, GC15, GC16</i>	<i>PC10, PC11, PC13, PC16, PC21, PC24, PC25</i>	<i>PL1, PL2, PL3, PL16, PL17, PL21, PL22, PL 24, PL25, PL 26, PL27, PL 28</i>
<b>MCPT 2</b>	<i>GC1, GC2, GC3, GC4, GC5, GC6, GC7, GC8, GC9, GC10, GC11, GC12, GC13, GC14, GC15, GC16</i>	<i>PC10, PC11, PC13, PC16, PC21, PC24, PC25</i>	<i>PL1, PL2, PL3, PL16, PL17, PL21, PL22, PL 24, PL25, PL 26, PL27, PL 28</i>
<b>MCPT 3</b>	<i>GC1, GC2, GC3, GC4, GC5, GC6, GC7, GC8, GC9, GC10, GC11, GC12, GC13, GC14, GC15, GC16</i>	<i>PC1, PC2, PC3, PC4, PC5, PC6, PC7, PC8, PC9, PC10, PC11, PC13, PC14, PC16, PC21, PC24, PC25</i>	<i>PL1, PL2, PL3, PL4, PL5, PL6, PL7, PL8, PL9, PL10, PL11, PL12, PL13, PL14, PL16, PL17, PL21, PL22, PL 24, PL25, PL 26, PL27, PL 28, PL 29</i>
<b>MCPT 4</b>	<i>GC1, GC2, GC3, GC4, GC5, GC6, GC7, GC8, GC9, GC10, GC11, GC12, GC13, GC14, GC15, GC16</i>	<i>PC1, PC2, PC3, PC4, PC5, PC6, PC7, PC8, PC9, PC10, PC11, PC13, PC14, PC16, PC21, PC24, PC25</i>	<i>PL1, PL2, PL3, PL4, PL5, PL6, PL7, PL8, PL9, PL10, PL11, PL12, PL13, PL14, PL16, PL17, PL21, PL22, PL 24, PL25, PL 26, PL27, PL 28, PL 29</i>

<b>ECPT 1</b>	<i>GC1, GC2, GC3, GC4, GC5, GC6, GC7, GC8, GC9, GC10, GC11, GC12, GC13, GC14, GC15, GC16</i>	<i>PC1, PC2, PC3, PC6, PC7, PC8, PC11, PC16, PC18, PC19, PC20, PC21, PC23, PC24, PC25</i>	<i>PL1, PL2, PL3, PL4, PL6, PL7, PL8, PL9, PL11, PL12, PL13, PL 14, PL16, PL17, PL18, PL19, PL20, PL21</i>
<b>ECPT 2</b>	<i>GC1, GC2, GC3, GC4, GC5, GC6, GC7, GC8, GC9, GC10, GC11, GC12, GC13, GC14, GC15, GC16</i>	<i>PC1, PC2, PC3, PC6, PC7, PC8, PC9, PC10, PC11, PC14, PC18, PC21, PC23, PC24, PC25</i>	<i>PL1, PL2, PL3, PL4, PL5, PL6, PL7, PL16, PL17, PL18, PL21, PL22, PL25, PL27</i>
<b>EC 1</b>	<i>GC1, GC2, GC3, GC4, GC5, GC6, GC7, GC8, GC9, GC10, GC11, GC12, GC13, GC14, GC15, GC16</i>	<i>PC21, PC23, PC25</i>	<i>PL1, PL2, PL3, PL21, PL22, PL25, PL27</i>
<b>EC 2</b>	<i>GC1, GC2, GC3, GC4, GC5, GC6, GC7, GC8, GC9, GC10, GC11, GC12, GC13, GC14, GC15, GC16</i>	<i>PC2, PC12, PC21, PC23, PC24, PC25</i>	<i>PL1, PL2, PL3, PL19, PL20, PL21, PL22, PL25, PL27</i>
<b>EC 3</b>	<i>GC1, GC2, GC3, GC4, GC5, GC6, GC7, GC8, GC9, GC10, GC11, GC12, GC13, GC14, GC15, GC16</i>	<i>PC5, PC11, PC14, PC17, PC21, PC23, PC25</i>	<i>PL1, PL2, PL3, PL14, PL15, PL19, PL20, PL21, PL22, PL25, PL27</i>
<b>EC 4</b>	<i>GC1, GC2, GC3, GC4, GC5, GC6, GC7, GC8, GC9, GC10, GC11, GC12, GC13, GC14, GC15, GC16</i>	<i>PC2, PC4, PC5, PC11, PC14, PC16, PC21, PC23, PC24, PC25</i>	<i>PL1, PL2, PL3, PL4, PL10, PL21, PL22, PL23, PL25, PL27</i>
<b>EC 5</b>	<i>GC1, GC2, GC3, GC4, GC5, GC6, GC7, GC8, GC9, GC10, GC11, GC12, GC13, GC14, GC15, GC16</i>	<i>PC1, PC2, PC3, PC5, PC6, PC11, PC16, PC21, PC23, PC24, PC25</i>	<i>PL1, PL2, PL3, PL4, PL6, PL7, PL16, PL17, PL18, PL21, PL22, PL25, PL27</i>
<b>EC 6</b>	<i>GC1, GC2, GC3, GC4, GC5, GC6, GC7, GC8, GC9, GC10, GC11, GC12, GC13, GC14, GC15, GC16</i>	<i>PC1, PC2, PC3, PC6, PC9, PC10, PC11, PC12, PC16, PC18, PC19, PC20, PC21, PC23, PC24, PC25</i>	<i>PL1, PL2, PL3, PL6, PL7, PL11, PL12, PL13, PL16, PL17, PL18, PL21, PL22, PL25, PL27</i>
<b>EC 7</b>	<i>GC1, GC2, GC3, GC4, GC5, GC6, GC7, GC8, GC9, GC10, GC11, GC12, GC13, GC14, GC15, GC16</i>	<i>PC1, PC2, PC3, PC6, PC7, PC8, PC10, PC11, PC12, PC16, PC18, PC21, PC23, PC24, PC25</i>	<i>PL1, PL2, PL3, PL4, PL5, PL6, PL7, PL8, PL9, PL10, PL11, PL12, PL13, PL 14, PL16, PL17, PL18, PL21, PL22, PL25, PL27, PL29</i>
<b>EC 8</b>	<i>GC1, GC2, GC3, GC4, GC5, GC6, GC7, GC8, GC9, GC10, GC11, GC12, GC13, GC14, GC15, GC16</i>	<i>PC1, PC2, PC3, PC6, PC7, PC8, PC9, PC10, PC11, PC12, PC14, PC16, PC18, PC19, PC20, PC21, PC22, PC23, PC24, PC25</i>	<i>PL1, PL2, PL3, PL4, PL5, PL6, PL7, PL8, PL9, PL10, PL11, PL12, PL13, PL14, PL15, PL16, PL17, PL18, PL19, PL20, PL21, PL22, PL24, PL25, PL 26, PL27, PL29</i>

## **5. Requirements for Availability of Internal Quality Assurance System in Higher Education**

In accordance with the Law of Ukraine “On Higher Education”, the University has developed and implemented Internal Quality Assurance System based on the principles contained in the “Standards and Guidelines for Quality in the European Higher Education Area” of the European Association for Quality Assurance in Higher Education and National Standard of Ukraine “Quality Management Systems” (UNSS) ISO 9001: 2015, Regulations of the National Agency for Quality Assurance in Higher Education on the introduction of Internal Quality Assurance System (by the decision of NAQAHE, Minutes no. 6 of June 26<sup>th</sup>, 2019).

IFNMU Quality Management System (QMS) is certified to provide services in the field of higher education at the university level and in the field of healthcare UNSS ISO 9001: 2015 (No. UA MQ. 048-129-23 of June 12<sup>th</sup>, 2023). In 2018, 2019, 2020, 2021, 2022). The University was under follow-up external supervisory audits. In 2023, a certification audit was conducted to assess the implementation and effectiveness of the quality management system at the University; it was confirmed that the QMS of IFNMU matched the internationally recognized current certificate.

Primary ways and means of education quality assurance at IFNMU:

- education programs development solely on grounds of competence, transition to an all-European understanding of education content of in the field of healthcare;
- monitoring of trends in the development of the world education and science in order to respond timely to global challenges, changes in educational services market conditions, introduction of new technologies;
- educational programs with a focus on the needs of educational and medical establishments, practical healthcare institutions by involving them in the educational process;
- development and implementation of intensive student-centred learning technologies (individualization of learning);
- introduction of distant learning technologies in the educational process;
- assisting students to acquire communicative competence in a foreign language at the required level;
- expansion of the University participation in international programs of academic mobility of students and academic staff;
- integration with educational institutions of different levels and with medical institutions;
- involvement of employers’ representatives and leading specialists in the educational programs content development, in the educational process participation and in graduates certification;
- provision of appropriate conditions for students practical training;
- marketing of educational services and formulation of proposals for new education programs introduction, systematic analysis of employment and career growth of graduates;
- improvement of measures aimed at strengthening of the students assessment objectivity;
- control of feedback procedures between educational process participants as a necessary cornerstone component of the process of quality assurance in higher education

in the field of 22 Healthcare;

- creation of organizational and technical conditions and means of assessment of educational process quality by former graduates;
  - continuous improvement of monitoring system and quality assurance of students training;
  - introduction of a system for academic staff performance assessment in education programs implementation;
  - participation in activities to foster a positive reputation of the institution;
  - approval and implementation of advanced training programs for the academic staff at the University and other institutions.

### **Monitoring and Periodic Revision of Education Programs**

Revision of education programs is based on the monitoring results. Modern criteria for the educational programs revision are formulated both as a result of the expected development of the field and the society's needs and as a result of feedback from external and internal stakeholders. Education programs are revised and reapproved at least once a year, usually before the beginning of the academic year.

### **Annual Assessment of Students**

Annual assessment of students is made in accordance with the Regulations on the Organization of the Educational Process at IFNMU and is published on the website of the University.

### **Advanced Training of Academic Staff**

Traineeship and regular advanced training of the academic staff are held in accordance with the Ukraine's regulatory legal act and Regulations on professional development of the academic staff of IFNMU.

Advanced training results are taken into account in the rating assessment of the academic staff. Ratings of the University's teachers are covered at the meetings of Learned Council and Rectorate and brought to the attention of the departments.

### **Publicity of Information on Education Programs, Degrees of Higher Education and Qualification**

Relevant information is covered on the official website of the University in accordance with the requirements of the Law of Ukraine "On Higher Education", "On Access to Public Information" (<https://www.ifnm.edu.ua/uk>).

### **Prevention and Detection of Academic Plagiarism**

Prevention of plagiarism in the University's academic environment is controlled by the "Regulations on the Detection and Prevention of Academic Plagiarism at the University" ([«Положенням про виявлення та запобігання академічного плагіату в Університеті»](#))

Recommendations for higher educational institutions on the development and implementation of the university system of academic honesty (by the decision of NAQAHE, Minutes no. 11 of October 29<sup>th</sup>, 2019).

## 6. References

1. Law of Ukraine “On Higher Education” «Про вищу освіту».
2. Law of Ukraine “On Education” «Про освіту».
3. Resolution of the Cabinet of Ministers of April 29<sup>th</sup>, 2015 no. 266 “On approval of the list of branches of knowledge and specialties for which candidates for higher education are trained” «Про затвердження переліку галузей знань і спеціальностей, за якими здійснюється підготовка ЄС здобувачів вищої освіти».
4. Resolution of the Cabinet of Ministers of March 28<sup>th</sup>, 2018 no. 334 “On approval of the procedure for the implementation of the Unified State Qualification Examination for master degree in the field of knowledge “Healthcare” «Про затвердження Порядку здійснення єдиного державного кваліфікаційного іспиту для здобувачів освітнього ступеня магістра за спеціальностями галузі знань “22 Охорона здоров’я”» as amended by the Resolution of the Cabinet of Ministers of Ukraine of April 3<sup>rd</sup>, 2019 no. 308 «Про внесення змін до Порядку здійснення єдиного державного кваліфікаційного іспиту для здобувачів ступеня вищої освіти магістр за спеціальностями галузі знань “22 Охорона здоров’я”».
5. Resolution of the Cabinet of Ministers of November 23<sup>rd</sup>, 2011 no. 1341 “On approval of the National Qualifications Framework” «Про затвердження Національної рамки кваліфікацій».
6. Resolution of the Cabinet of Ministers of March 28<sup>th</sup>, 2018 no. 302 “On approval of the Regulations on the system of continuous professional development of healthcare professionals” «Про затвердження Положення про систему безперервного професійного розвитку фахівців у сфері охорони здоров’я».
7. National Classifier of Ukraine: “Classifier of Professions” SC 003:2010 approved by Order no. 327 of July 28<sup>th</sup>, 2010 Класифікатор професій ДК 003:2010.
8. National Classification Framework approved by Resolution of the Cabinet of Ministers of Ukraine of November 23<sup>rd</sup>, 2011 no. 1341 Національна рамка кваліфікацій.
9. Instructional guidelines for the development of higher education standards approved by Order of the Ministry of Education and Science of Ukraine of June 1<sup>st</sup>, 2017 no. 600 (as amended) Методичні рекомендації щодо розроблення стандартів вищої освіти.
10. Decree of the President of Ukraine “Issues of European and Euro-Atlantic Integration” of April 20<sup>th</sup>, 2019 no. 155/2019 «Питання європейської та євроатлантичної інтеграції».
11. Order of the Ministry of Education and Science of Ukraine of April 30<sup>th</sup>, 2020 no. 584 “On amendments to the guidelines for the development of higher education standards” «Про унесення змін до методичних рекомендацій щодо розроблення стандартів вищої освіти».
12. Standard of higher education in specialty 222 Medicine in the field of knowledge 22 Healthcare of the second (master’s) level of higher education approved by Order of the Ministry of Education and Science of Ukraine of November 8<sup>th</sup>, 2021 no. 1197 Стандарт вищої освіти спеціальності 222 Медицина галузі знань 22 Охорона здоров’я для другого (магістерського) рівня вищої освіти.
13. Humanity and Empathy in Health Care / Manual for teachers / Anastasiia Leukhina and others / Kyiv: Master of Books: 2022. 364 p.
14. Law of Ukraine “On Amendments to Certain Laws of Ukraine on the Development of Individual Educational Trajectories and Improvement of the Educational Process”, 23.04.2024, 3642-IX.

**Appendix 1**  
**List 1 (Syndromes and Symptoms)**

1. Amenorrhea
2. acromegaly
3. anemic syndrome
4. anuria and oliguria
5. arterial hypertension
6. arterial hypotension
7. chest pain
8. abdominal pain
9. back and limb pain
10. perineal pain
11. sore throat
12. vomiting
13. broncho-obstructive syndrome
14. bulbar syndrome
15. pleural effusion
16. paranoid-hallucinatory syndrome
17. fever
18. hemorrhagic syndrome
19. hypoglycemia
20. hyperglycemia
21. exanthema, enanthema
22. hepatomegaly and hepatolienal syndrome
23. headache
24. dysuria
25. dysmenorrhea
26. dyspepsia
27. dysphagia
28. diarrhea
29. jaundice
30. dyspnea
31. suffocation
32. constipation
33. dizziness
34. stunted growth
35. cardiomegaly
36. cough
37. bowel obstruction
38. coma
39. external hemorrhage
40. internal hemorrhage
41. hemoptysis
42. galactorrhea
43. lymphadenopathy
44. meningeal syndrome
45. uterine bleeding
46. edema syndrome
47. obesity (+body weight)
48. paresis, paralysis
49. sexual precocity
50. cortical bone fractures
51. tension pneumothorax (closed)

52. tension pneumothorax (open)
53. valvular pneumothorax
54. polyuria
55. portal hypertension
56. speech disorder (aphasia)
57. heart rhythm and conduction disorders
58. sudden cardiac arrest
59. disorders of consciousness
60. itchy skin
61. urinary syndrome
62. dementia syndrome
63. dehydration syndrome
64. maldigestion syndrome
65. thirst
66. stridor
67. articular syndrome
68. convulsions
69. weight loss
70. cyanosis
71. partial or complete vision loss
72. partial or complete hearing loss
73. gastrointestinal bleeding

## List 2 (Syndromes)

### I) Diseases of blood and blood-forming organs, disorders involving immune mechanism

1. anemia
2. hemolytic disease of the newborn
3. hemophilia
4. leukemia
5. lymphoma
6. congenital (Bruton Disease, Aldrich-Wiskott syndrome) and acquired immunodeficiency disorders
7. neonatal sepsis
8. surgical sepsis
9. idiopathic thrombocytopenic purpura
10. chronic radiolesion

### II) Mental and behavioral disorders:

11. bipolar affective disorder
12. acute psychosis, including alcoholic delirium
13. epilepsy
14. neurotic disorders
15. personality disorders
16. schizophrenia

### III) Nervous system disorders:

17. intracranial injury
18. meningitis, encephalitis
19. migraine and other types of headaches
20. perinatal encephalopathy
21. autonomic nervous system disorders
22. cerebrovascular disturbance

23. vertebrogenous diseases of the nervous system, neuropathies and polyneuropathies
24. multiple sclerosis
25. chronic occupational disturbances (hand-arm vibration syndrome, occupational dyskinesia)
26. strokes (ischemic, hemorrhagic)

#### *Eye Diseases*

27. blepharitis
28. glaucoma
29. conjunctivitis
30. intraocular foreign body
31. eye injuries
32. retinopathy
33. exophthalmia

#### *Ear, Nose and Throat Diseases*

34. laryngitis
35. otitis
36. paratonsillar abscess
37. sinusitis
38. tonsillitis
39. ear, nose and throat injuries

### IV) Cardiovascular system disorders:

40. aortic aneurysm
41. atherosclerosis
42. varicose vein in legs
43. congenital heart defect
44. secondary hypertension
45. acute occlusion of great and peripheral arteries
46. endocarditis

47. essential and secondary arterial hypertension
48. coronary heart disease
49. carditis
50. cardiomyopathy
51. pulmonary heart
52. acquired heart disease
53. obliterating endarteritis
54. pericarditis
55. heart rhythm and conduction disorders
56. heart failure
57. injuries of the heart and blood vessels
58. pulmonary embolism
59. phlebitis, thrombophlebitis

**V) Respiratory and mediastinal diseases:**

60. asphyxia
61. bronchial asthma
62. bronchitis
63. bronchiectasis
64. bronchopulmonary dysplasia
65. congenital malformations of the respiratory organs
66. acute respiratory distress syndrome
67. respiratory failure
68. infectious-destructive pulmonary disease
69. pulmonary failure
70. mediastinitis
71. cystic fibrosis
72. lung and mediastinum neoplasms
73. pleuritis
74. pneumoconiosis
75. pneumonia
76. pneumothorax
77. respiratory distress syndrome and neonatal pneumonia
78. foreign body in respiratory tract
79. chest injuries (closed, open)
80. chronic obstructive pulmonary disease

**VI) Diseases of digestive organs:**

81. rectal prolapse
82. peptic ulcer disease
83. congenital malformations of digestive organs
84. gastroesophageal reflux disease, esophagitis
85. gastritis, duodenitis
86. acute and chronic hepatitis
87. acute intestinal obstruction
88. acute and chronic appendicitis
89. acute and chronic pancreatitis
90. benign esophageal diseases
91. enteritis, colitis
92. inflammatory diseases of rectum and perianal region
93. incarcerated and nonincarcerated hernias
94. neoplasms of esophagus, stomach, colon, liver and pancreas

95. gastric and duodenal peptic ulcers
96. peritonitis
97. hollow viscus perforation
98. liver failure
99. malabsorption syndrome
100. pyloric stenosis
101. abdominal injuries (superficial, open)
102. gastrointestinal functional disorders
103. postgastrectomy dumping syndrome
104. cholecystitis, cholangitis, cholelithiasis, choledocholithiasis
105. liver cirrhosis
106. gastrointestinal bleeding

**VII) Genitourinary system diseases:**

107. renal amyloidosis
108. balanitis, balanoposthitis
109. congenital malformations of the urinary system
110. glomerulonephritis
111. dysmetabolic nephropathy
112. nephrotic syndrome
113. kidney, urinary tract and prostate neoplasms
114. pyelonephritis
115. prostatitis
116. urolithiasis
117. tubulointerstitial nephritis
118. urethritis
119. chronic kidney disease
120. cystitis

**VIII) Skin and subcutaneous tissue diseases:**

121. allergodermatoses (dermatitis, toxidermia, eczema)
122. bacterial diseases of the skin and subcutaneous tissue, pyoderma
123. pyoinflammatory diseases of fingers and hands
124. pyoinflammatory diseases in children and newborns
125. mycosis
126. burns and frostbite
127. parasitic skin diseases (scabies, pediculosis)
128. psoriasis
129. vesicular dermatosis
130. specific surgical infection (anaerobic clostridial and non-clostridial)

**IX) Diseases of musculoskeletal system and connective tissue:**

131. ankylosing spondylitis
132. congenital and acquired malformations of the musculoskeletal system
133. acute rheumatic fever

134. dermatomyositis and polymyositis
135. musculoskeletal system neoplasms
136. osteoarthritis
137. osteomyelitis
138. gout
139. multiple trauma
140. reactive arthritis
141. rheumatoid arthritis
142. systemic scleroderma
143. systemic lupus erythematosus
144. systemic vasculitis (nodular polyarteritis, hemorrhagic vasculitis, hypersensitive vasculitis)
145. selected fractures of the bones of the shoulder, forearm, hand, thigh, leg, foot
146. pelvic injury
147. injuries to the spine
148. injuries of major joints (hip, knee, ankle, elbow joints)
149. chronic rheumatic disease
150. juvenile rheumatoid arthritis
- X) Endocrine, nutritional and metabolic diseases:**
151. acromegaly and pituitary gigantism
152. hypothyroidism
153. oligotrophy, protein-energy malnutrition
154. hypopituitarism
155. thyrotoxicosis
156. endemic goitre
157. diabetes insipidus
158. nodular goiter, thyroid tumors
159. obesity
160. congenital adrenal cortical hyperplasia
161. calcium-phosphorus and vitamin D metabolic disorders
162. genetic syndromes with endocrine implications: Turner syndrome, Russell-Silver syndrome, Prader-Willi syndrome, Laron syndrome
163. thyroiditis
164. Cushing syndrome and disease
165. chronic adrenal insufficiency
166. diabetes mellitus
167. hypoparathyroidism
168. hyperparathyroidism
169. adrenal tumors
170. organic (including congenital) hyperinsulinism
171. neuro-endocrine tumors
172. pituitary tumors
173. precocious sexual development
174. hypogonadism
175. cryptorchidism
176. disorders of sexual differentiation
177. Klinefelter syndrome
178. nanism in a child born SGA
- XI) Infectious and parasitic diseases:**
179. bacterial food poisoning
180. erysipelas
181. botulism
182. viral hepatitis
183. varicella
184. congenital neonatal infections
185. helminthiasis
186. herpes virus infection
187. influenza and other acute respiratory viral infections
188. diphtheria
189. infectious mononucleosis
190. candidiasis
191. whooping cough
192. bacterial intestinal infections
193. viral intestinal infection
194. measles
195. tick-borne viral encephalitis
196. rubella
197. leptospirosis
198. malaria
199. meningococcosis
200. highly dangerous virus infection
201. mumps
202. poliomyelitis
203. tetanus
204. protozoal infections
205. rickettsial disease
206. anthrax
207. rabies
208. scarlet fever
209. tuberculosis of various sites
210. Lyme disease
211. disease caused by human immunodeficiency virus (HIV)
212. chlamydial infections
213. cholera
214. plague
- **Sexually transmitted infectious diseases:**
215. gonococcal infection
216. syphilis
- XII) Diseases of the female reproductive system:**
- pathologic pregnancy:*
217. multiple pregnancy
218. emesis gravidarum
219. extragenital pathology and pregnancy
220. fetal distress in pregnancy
221. intrauterine growth restriction
222. immune conflict in pregnancy
223. molar pregnancy

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|--|--|
| 224. placenta previa   | <i>gynecological diseases:</i>   |
| 225. abruptio placentae  | 237. abnormal uterine bleeding   |
| 226. premature delivery and post-term pregnancy                  | 238. ovarian apoplexy  |
| 227. позаматкова вагітність                                      | 239. infertility   |
| 228. preeclampsia and eclampsia                                  | 240. congenital malformations of the female reproductive organs          |
| 229. spontaneous abortion  | 241. benign mammary dysplasia  |
| <i>labour and postpartum pathologies:</i>                        | 242. benign and precancerous neoplasms of the female reproductive organs |
| 230. abnormal uterine contraction                                | 243. endometriosis   |
| 231. pelvic abnormalities, including cephalopelvic disproportion | 244. inflammatory diseases of the female reproductive organs             |
| 232. fetal distress in pregnancy                                 | 245. malignant tumors of the female reproductive organs                  |
| 233. intrapartum and postpartum hemorrhage                       | 246. mastitis  |
| 234. fetal malposition and presentation                          | 247. mammary neoplasms   |
| 235. postpartum sepsis   |  |
| 236. uterus and birth canal injuries                             |  |

### List 3 (Emergencies)

- |  |   |
|--|---|
| 1. asphyxia (including neonatal)   | 19. acute blood loss syndrome, including in field conditions and in emergencies |
| 2. hypertensive crisis   | 20. cardiac arrest  |
| 3. hypoglycemia (come)   | 21. collapse  |
| 4. acute respiratory failure   | 22. consciousness impairment and coma   |
| 5. acute urinary retention   | 23. renal colic   |
| 6. acute renal failure   | 24. biliary colic   |
| 7. acute kidneys injury  | 25. acute anaphylaxes   |
| 8. acute hepatic failure   | 26. acute heart arrhythmia  |
| 9. acute cardiac failure   | 27. cold injury, including in field conditions                                  |
| 10. acute poisoning, including chemical warfare  | 28. heat injury, including in field conditions                                  |
| 11. acute psychosis  | 29. venous and arterial thromboembolisms  |
| 12. acute coronary syndrome  | 30. convulsive disorder   |
| 13. acute radiation and chemical traumas, including in field conditions and in emergencies | 31. drowning  |
| 14. acute brain failure  | 32. strangulation asphyxia  |
| 15. diabetic coma, including ketoacidotic, hyperosmolar, lactacidemic                      | 33. normal birth  |
| 16. electric injury  | 34. shocks  |
| 17. status epilepticus   | 35. snakes, insects and animal bites  |
| 18. acute bleeding   | 36. penetrating injury, including in warfare                                    |
|  | 37. burns, including in field conditions  |
|  | 38. airway, gastrointestinal tract, ENT-organs, and eye foreign bodies          |

### List 4 (Laboratory and Instrumental Examinations)

1. pleural fluid analysis
2. ascitic fluid analysis
3. synovial fluid analysis
4. Zymnysky type urinalysis
5. Nechyporenko type urinalysis
6. blood and urine alfa amylase activity, fecal elastase
7. proteins of blood and its fracture, C-reactive protein
8. blood glucose, glycosylated hemoglobin
9. oral glucose tolerance test
10. lipids and lipoproteins of blood and its fracture
11. blood hormones

12. blood serum ferritin, iron and copper
13. creatinine, urea of blood and urine, glomerular filtrate rate
14. blood electrolytes
15. blood aminotransferase
16. total bilirubin of blood and its fractions
17. coagulogram
18. blood uric acid
19. blood alkaline phosphatase
20. histomorphologic examination of lymph node biopsy
21. histomorphologic examination of solid organs biopsy
22. histomorphologic examination of mucous membranes biopsy
23. histomorphologic examination of muscles and skin biopsy
24. histomorphologic examination of placenta biopsy
25. exploration of the indoor environment (indicators of microclimate, natural and artificial lighting, bacteriological and chemical air pollution)
26. external respiration function test
27. standard 12-lead ECG
28. bronchoscopy
29. endoscopy of the digestive tract
30. echocardiography and Doppler imaging
31. fecalysis
32. complete blood count
33. clinical urinalysis
34. urinary sugar and acetone
35. cerebrospinal fluid study
36. sternal punctate test
37. sputum examination
38. immunological blood profile
39. serum tests in infectious diseases
40. viral infections express tests
41. amplification assays in infectious diseases (PCR, LCR)
42. serum tests in autoimmune diseases
43. chemical and bacteriological studies of the human environment (air, water, soil)
44. microbiological study of biological fluids and secretions
45. radiation measurement (sound, vibration, ionizing), individual radiometry
46. instrumental visualization of the thyroid gland
47. radiopaque angiography
48. instrumental techniques to visualize abdominal cavity
49. instrumental techniques to visualize thoracic cavity
50. instrumental techniques to visualize the genitourinary system
51. instrumental techniques to visualize a fetus
52. instrumental techniques to visualize the skull, spinal column, spinal cord, bones, and joints
53. instrumental techniques to visualize mammary gland
54. tuberculinodiagnosis
55. multiple-point fraction analysis of bile and pH test of the stomach and esophagus
56. chemical, organoleptic, bacteriological food and potable water research
57. cervical cytology test
58. measurement of ergonomic indicators of difficulty and intensity of work

### **List 5 (Medical Procedures)**

1. to make closed-chest massage
2. to perform artificial respiration
3. to perform defibrillation using manual automatic defibrillator cardioverter
4. to register standard 12-lead ECG
5. to perform temporary hemostasis
6. to perform initial surgical wound debridement, to apply a bandage, to remove sutures, including in field conditions
7. to apply arresting bleeding tourniquet and use arresting bleeding medications, including in field conditions
8. to insert nasogastric and orogastric tube
9. to carry out transport immobilization
10. to administer drugs (intravenous, bolus, drip, intraosseous administration) , including in field conditions
11. to provide peripheral venous access
12. to measure blood pressure
13. to restore airway patency
14. to catheterize the urinary bladder using a soft catheter
15. to perform anterior nasal packing
16. to make clinical examination of the visual organ and ENT organs
17. to perform the procedure of early skin-to-skin contact and early breastfeeding
18. to perform digital rectal examination and rectal examination using a rectal speculum
19. to perform digital prostate examination
20. to perform clinical examination of mammary glands
21. to perform pleurocentesis
22. to perform abdominal paracentesis through the posterior arch
23. to type a blood sample and Rh factor
24. to transfuse blood and blood substitutes
25. to perform bimanual examination and speculum examination of a woman
26. to perform pelvimetry
27. to perform external (Leopold maneuvers) and internal obstetric examination
28. to perform fetus auscultation
29. to take swabs for bacterioscopic, bacteriological, cytological examination
30. to palpate the thyroid gland
31. to examine and evaluate the external genitalia of boys
32. to assess the state of children's sexual development