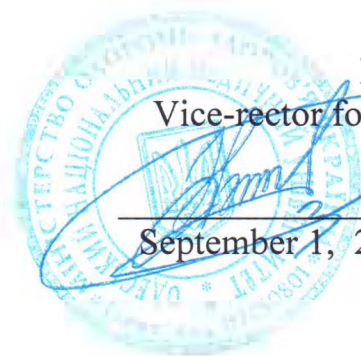


MINISTRY OF THE HEALTH CARE OF THE UKRAINE
ODESSA NATIONAL MEDICAL UNIVERSITY

DEPARTMENT OF FORENSIC MEDICINE



I APPROVE

Vice-rector for scientific and pedagogical work

Eduard BURIACHKIVSKY

September 1, 2023

**WORKING PROGRAM OF EDUCATIONAL DISCIPLINE
“MODERN ASPECTS OF FORENSIC TRAUMATOLOGY”**

Level of high education: the second (master) level

Field of knowledge: 22 «Health care»

Specialties: 222 «Medicine»

Educational-professional program: Medicine

Odesa 2023

The working program is compiled on the basis of the educational and professional program «Medicine» for the training of specialists of the second (master's) level of higher education in the specialty 222 «Medicine» of the field knowledge 22 «Health care», approved by Scientific Council of the ONMedU (protocol No.8 of June 29)

Developers:

MD in Medicine, profesor Grygoryi Kryvda

PhD in Medicine, assistant professor Borys Yavorskyi

Assistant Larysa Larson

The program was approved at the meeting of the forensic medical department forensic medical.

Protocol No., 1 date August 29, 2023

Head of the department _____ Grygoryi KRYVDA

Agree with the guarantor of OPP _____ Valeriia MARICHEREDA


Approved by the subject cycle commission for medical and biological disciplines
Protocol No., 1 date August 29, 2023

Head of the subject cycle methodical commission from medical and biological disciplines of ONMedU _____ Leonid GODLEVSKY

Reviewed and approved at the meeting of the department

Minute No 1 of "1" September 2023

Head of the department


(signature)

Sytnikova Varvara
(First name, LAST NAME)

Reviewed and approved at the meeting of the department

Minute No 1 of " " 20

Head of the department _____ Varvara SYTNIKOVA

1. Description of the academic discipline:

Name of indicators	Field of knowledge, specialty, specialization, level of higher education	Characteristics of the academic discipline
The total number of: Credits: 3.0 Hours: 90 Content modules : 8	Branch of knowledge 22 "Health care"	<i>Full-time education</i>
		<i>Mandatory discipline</i>
	Specialty 222 "Medicine"	<i>Year of training: 4</i>
		<i>Semesters VII - VIII</i>
	Level of higher education second (master's)	<i>Lectures (0 hours)</i>
		<i>Seminars (0 hours)</i>
		<i>Practical (30 hours)</i>
		<i>Laboratory (0 hours)</i>
		<i>Independent work (60 hours)</i>
		<i>including individual tasks (0 hours)</i>
		<i>Final control form –offset</i>

2. The purpose and tasks of the educational discipline

Purpose: The aim of teaching discipline "Modern Aspects of Forensic Traumatology" is to provide the future doctor with the necessary theoretical knowledge in the field of traumatic injuries, their duration and mechanism of formation, which will ultimately contribute to the establishment of a correct diagnosis in clinical practice, as well as help law enforcement agencies in solving crimes against the person. "Forensic medicine" follows from the goals of the educational-professional training program for graduates of higher medical education and is determined by the content of those systemic knowledge and skills that must be mastered by a doctor-specialist. The knowledge that by the applicants of higher education receive from the discipline is basic for the block of disciplines that provide natural scientific and professional-practical training.

Tasks:

- to provide knowledge about modern possibilities of medico-legal examination and structure of medico-legal service, and also about the functions of bureau and its subdivisions;
- to provide knowledge about principles of realization of medico-legal examination;
- to teach students to diagnose the fact of biological death;
- to teach to describe bodily injuries;
- to teach to determine the type of bodily injury and mechanism of its infliction;
- to teach to use criteria for determination of degree of gravity of bodily injuries of the person;
- to know the requirements to seize material evidences of biological origin

The process of studying the discipline is aimed at forming elements of the following competencies:

Integral (IC):

The ability to solve typical and complex problems, including those of a research and innovation nature in the field of medicine. Ability to continue learning with a high degree of autonomy.

General (GC):

GC 1 Ability to abstract thinking, analysis and synthesis

GC 3 Ability to apply knowledge in practical situations

GC 4 Knowledge and understanding of the subject area and understanding of professional activity

GC 6 Ability to make informed decisions.

GC 10 Ability to use information and communication technologies

GC 12 Determination and perseverance in terms of tasks and responsibilities

GC 14 Ability to realize one's rights and responsibilities as a member of society, to realize the values of civil (free democratic) society and the need for its sustainable development, the rule of law, human and civil rights and freedoms in Ukraine

Special (SC)

SC 16 . Ability to maintain medical documentation , including electronic forms

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

SC 28. Ability to apply fundamental biomedical knowledge at a level sufficient to perform professional tasks in the field of healthcare.

Program learning outcomes (PLO):

PLO 1. Have thorough knowledge of the structure of professional activity. To be able to carry out professional activities that require updating and integration of knowledge. To be responsible for professional development, the ability for further professional training with a high level of autonomy.

PLO 2. Understanding and knowledge of fundamental and clinical biomedical sciences, at a level sufficient for solving professional tasks in the field of health care.

PLO 3. Specialized conceptual knowledge, which includes scientific achievements in the field of health care and is the basis for conducting research, critical understanding of problems in the field of medicine and related interdisciplinary problems.

PLO 21. Find the necessary information in professional literature and databases

of other sources, analyze, evaluate and apply this information.

As a result of studying the academic discipline, the applicant of higher education must:

Know:

- Laws, turned on the protection of inviolability of the individuality; legislation about forensic-medical examination, rules and duties and responsibility of the medical staff for the professional offence, and also main laws, which regulate the practice of the medical staff;
- Modern possibilities of forensic medical examination, structure of the service and functions of its subdivisions;
- Functions of a forensic expert in accordance with procedural legislation (performing the functions of a forensic expert in cases established by law);
- Signs of biological death, description of the corpse at the place of its discovery, understanding of corpse phenomena, description of bodily injuries and determination of their type, finding and description of physical evidence of biological origin.

Be able to:

- Describe the injuries and diagnose their characteristic properties of blunt, sharp objects, vehicles and firearms, acquire skills to establish the mechanism, age and life of the injury;
 - To determine the severity of bodily injuries during the examination of victims, accused and other persons, to draw up a document correctly;
 - Carry out an initial inspection and describe the corpse and physical evidence (various traces) at the scene;
 - To establish the fact and time (prescription) of death;
 - Make a sectional (morphological) diagnosis and establish the cause of death;
 - Carry out a forensic medical examination based on the materials of investigative or court cases and document it.

Master the skills:

- Forensic examination of the victim;
- Examination of the corpse at the scene;
- Establishment of the cause of death during forensic examination of the corpse in cases of violent and non-violent death

3. Content of the subject

Section 1. General forensic medicine. Tasks and subject of forensic medicine. History of its development, organizational bases of forensic medical examination.

Topic 1. Tasks and subject of forensic medicine. History of its development, organizational bases of forensic medical examination.

Forensic medicine as a science. Forensic medical examination. Expert, forensic-medical expert, doctor expert. Stages of the development of forensic medicine. Peculiarities of the 5th modern stage. Role of the forensic medical examination in the work of organs of jurisprudence and health protection. Contribution of prominent Ukrainian scientists in the development of forensic medicine

Organization of the forensic-medical service in Ukraine and other countries. Structure of Bureau of Forensic medical examinations. Functions of its departments. Rights, duties and responsibility of forensic medical expert and doctor-expert during the performing of expert functions. Guaranties of the independence of the expert.

Objects and kinds of forensic-medical examinations and free examinations. Organization of forensic medical examinations: their assignment, documentation and its content. Prescription, organization and performing of commission forensic examination in the case of professional and official offences of medical staff

Section 2. Forensic tanatology

Topic 2. Forensic tanatology. Examination of the corpse on the scene of its detection. Forensic-medical autopsy, its demonstration.

Corpses, which undergo by forensic autopsy. Forensic and pathologoanatomical autopsy, their peculiarities. Concept “death”. Forensic medical classification of death. Determination of category, kind of death. Role of forensic medical expert in assessment of the kind of violent death. Concept of tanatology. General, specific and molecular tanatology. Pathological physiology of dying. Terminal condition. Rapid and agonal death. Clinical and biological death, their diagnosing. Apparent death. Usage of organs and tissues for transplantation. Medico-legal aspects. “Brain death”. Livores mortis and their forensic importance. Rigor mortis, theories of its development. Its forensic importance. Drying and cooling of the body. Forensic importance. Aytolysis and its manifestations in internal organs. Putrefaction: mechanism of development, manifestations. Entomofauna of the corpse and its forensic importance. Late post-mortem signs. Natural and artificial conservation of the body. Forensic importance. General rules and stages of forensic autopsy. Documentation. Medical death certificate

Peculiarities of the examination of the corpse of unknown person Forensic criteria of detection of the time of death occurrence: by post-mortem signs, supravital reactions and results of laboratory tests. Role of doctor-specialist in the forensic medical examination during the inspection of the corpse on the scene of its detection. Phases of inspection of scene of incident.

Section 3. Forensic examination of victims, accused and other persons. Forensic medical examination of controversial sexual conditions and sexual crimes.

Topic 3. Forensic examination of victims, accused and others.

Forensic examination of living persons: reasons to perform the examination, peculiarities and documentation. Juridical classification and expert criteria of the degree of gravity of physical injuries. Grievous physical injuries, their signs, peculiarities of forensic examination. Forensic medical examination of health condition: aggravation, simulation, dissimulation, artificial and simulated diseases, self-injury

Section 4. Forensic medical examination of injuries and death caused by mechanical factors.

Topic 4. Forensic examination of injuries and death from mechanical factors. Damage from blunt objects. Transport injury. Forensic examination of injuries and death from mechanical factors. Damage from sharp objects. Gunshot wound: forensic examination and diagnosis.

Concept “injury”. Environmental factors, which affect the organism. Classification of the injuries. Anatomical and functional injuries. Traumatism and its kinds. Peculiarities of the skin injury description. Injuries caused by blunt objects, their classification, mechanism of their effect. Abrasion, its forensic importance. Bruise, its forensic importance. Hurt wounds, its forensic importance. Fractures of flat and tubular bones, which were caused by blunt objects. Cranio-cerebral injury: its kinds – impressive, diffuse axonal injury. Peculiarities of injuries from the fall on a flat surface and fall from a height. Peculiarities of the injuries during railway injury Automobile injury. Peculiarities of the injuries during the contact of automobile with a human. Incised, stab wounds, their peculiarities, which related with the kind of violent death. Determination of the internal wound canal. Incised-stab wounds. Chopped wound. Main causes of death from the blunt and sharp objects, their explanation. Forensic assessment of the vital physical injuries by histological, histochemical and biochemical methods. Classification of firearms. Structure of weapon cartridge and mechanism of a shot. Supplementary factors of shot. Kinetic energy of the bullet. Mechanism of the bullet’s effect on the human body depending on the kinetic energy. Hydrodynamic effect. Signs of contact shot. Signs of suicide by firearm. Signs of close and distant shot Injuries caused by shotgun. Structure of shotgun cartridge. Determination of the distance of shot. Peculiarities of the gunshot injuries of flat and tubular bones. Determination of the way of wound canal and succession of shots. Importance of the laboratory methods of investigation during the forensic examination of gunshot injuries.

Section 5. Forensic examination of physical evidence of biological origin and forensic research methods.

Topic 5. Forensic examination of physical evidence of biological origin and forensic research methods.

The concept of physical evidence, their importance in the disclosure of crimes against life and health. Forensic blood examination. Forensic medical and forensic research objects of forensic medical examination. Physical and technical methods of studying gunshot wound.

4. Structure of the academic discipline:

Topic	Total hours			
	Total	Including		
		L.	Pr.cl.	SIW
Section 1. General forensic medicine. Tasks and subject of forensic medicine. History of its development, organizational bases of forensic medical examination.				
Topic 1. Tasks and subject of forensic medicine. History of its development, organizational bases of forensic medical examination.	12	0	2	10
Section 2. Forensic tanatology				
Topic 2. Forensic tanatology. Examination of the corpse on the scene of its detection. Forensic-medical autopsy, its demonstration.	14	0	2	12
Section 3. Forensic examination of victims, accused and other persons.				
Topic 3. Forensic examination of victims, accused and others.. Forensic medical examination to determine the severity of bodily injuries and health status.	16	0	4	12
Section 4. Forensic medical examination of injuries and death caused by mechanical factors.				
Topic 4. Forensic examination of injuries and death from mechanical factors. Damage from blunt objects. Transport injury. Forensic examination of injuries and death from mechanical factors. Damage from sharp objects. Gunshot wound: forensic examination and diagnosis.	30	0	20	10
Section 5. Forensic examination of physical evidence of biological origin and forensic research methods.				
Topic 5. Forensic examination of physical evidence of biological origin and forensic research methods.	18	0	2	16
Offset	0	0	0	0
Total: hours	90	0	30	60

5. Topics of lectures / seminars / practical / laboratory classes

5.1. Topics of lectures

Lectures classes are not provided

5.2. Topics of seminar classes

Seminar classes are not provided.

5.3. Topics of practical classes

№	TOPIC	Hours
1.	Topic 1. Practical lesson. Procedural and organization aspects of forensic-medical examination.	2
2.	Topic 2. Practical lesson General aspects of forensic tanatology. Forensic autopsy in case of violent death. Demonstration of the autopsy.	2
3.	Topic 3. Practical lesson. Forensic-medical examination of living persons with detection of degree of gravity of the body injury.	4
4.	Topic 4. Practical lesson 4.. General issues of forensic traumatology	4
5.	Topic 4. Practical lesson 5 Forensic medical examination of injuries and death from mechanical factors. Damage from the action of blunt objects. Transport trauma.	6
6.	Topic 4. Practical lesson 6 Forensic examination of injuries and death from mechanical factors. Injuries from sharp objects.	4
7.	Topic 4. Practical lesson 7. Forensic medical examination of gunshot wounds. Forensic medical substantiation of the mechanism of injury and cause of death from firearms.	6
8.	Topic 5. Practical lesson 8. Forensic examination of material evidence of biological origin. Forensic medical and forensic research of objects of forensic examination. Physical and technical methods of studying gunshot wounds.	2
	Offset	0
	Total	30

5.4. Topics of laboratory classes

Laboratory classes are not provided

6. Independent work

№	TOPIC	Number of hours
1.	Topic 1. Preparation for practical classes 1	10
2.	Topic 2. Preparation for practical classes 2	12
3.	Topic 3. Preparation for practical classes 3	12
4.	Topic 4. Preparation for practical classes 4-7	10
5.	Topic 5. Preparation for practical classes 8	16
	Total	60

7. Teaching methods

Practical classes: conversation, solving clinical situational problems, practicing the skills of examination of the subject, the corpse, instruction and practice of skills on macropreparations, training exercises on topics.

Independent work: independent work with recommended basic and additional literature, with electronic information resources, preparation of reporting documents and practice diary.

Individual tasks

Not provided.

8. Forms of control and assessment methods (including criteria for evaluating learning outcomes)

Current control: oral control, testing, assessment of practical skills, solving situational clinical problems, assessment of activity in the classroom.

Final control: credit

About the evaluation of the current educational activity in a practical session

When assessing the mastery of each topic, a student of higher education is given grades on a 4-point (traditional) scale ("2", "3", "4", "5").

1. Evaluation of theoretical knowledge on the subject of the lesson:

- methods: survey, solving a situational clinical problem, tests
- the maximum score is 5, the minimum score is 3, the unsatisfactory score is 2.

2. Assessment of practical skills on the topic of the lesson:

- methods: assessment of the correctness of the performance of practical skills
- the maximum score is 5, the minimum score is 3, the unsatisfactory score is 2.

The grade for one practical session is the arithmetic average of all components and can only have a whole value (5, 4, 3, 2), which is rounded according to the statistical method.

Evaluation of the independent work of a student of higher education. The independent work of a student of higher education, which is provided by the topic of the lesson along with the classroom work, is evaluated during the current control of the topic in the corresponding lesson.

Current assessment criteria for practical training:

Rating	Evaluation criteria
«5»	The applicant is fluent in the material, takes an active part in discussing and solving a situational clinical problem, confidently demonstrates practical skills during the examination of the victim or corpse and interpretation of clinical, laboratory and instrumental studies, expresses the opinion on the topic, demonstrates clinical thinking
«4»	The applicant is well versed in the material, participates in the discussion and solution of situational clinical problems, demonstrates

	practical skills during the examination of the victim or corpse and interpretation of clinical, laboratory and instrumental studies with some errors, expresses the opinion on the topic, demonstrates clinical thinking.
3» «	The applicant does not know enough material, insecurely participates in the discussion and solution of a situational clinical problem, demonstrates practical skills during the examination of the victim or corpse and interpretation of clinical, laboratory and instrumental studies with significant mistakes
2» «	The applicant does not know the material, does not participate in the discussion and solution of the situational clinical problem, does not demonstrate practical skills during the examination of the victim or corpse and the interpretation of clinical, laboratory and instrumental data.

Credit is given to the student who completed all tasks of the work program of the academic discipline, took an active part in practical classes, completed and defended an individual assignment and has an average current grade of at least 3.0 and has no academic debt. Assessment is carried out: at the last lesson before the beginning of the examination session - with the tape system of learning, at the last lesson - with the cycle system of learning. The credit score is the arithmetic mean of all components according to the traditional four-point scale and has a value that is rounded according to the statistics method with two decimal places after the decimal point.

9. Distribution of points received by applicant of higher education

The obtained average score for the academic discipline for applicants who have successfully mastered the work program of the academic discipline is converted from a traditional four-point scale to points on a 200-point scale, as shown in the table:

Conversion table of a traditional assessment into a multi-point scale

National assessment for discipline	The sum of points for the discipline
Excellent ("5")	185 - 200
Good ("4")	151 - 184
Satisfactory ("3")	120-150
Unsatisfactory ("2")	Below 120

Multi-point scale (200-point scale) characterizes the actual success of each applicant in mastering the educational component. The conversion of the traditional grade (average score for the academic discipline) into a 200-point grade is performed by the information and technical department of the University.

According to the obtained points on a 200-point scale, the achievements of the applicants are evaluated according to the ECTS rating scale. Further ranking according to the ECTS rating scale allows you to evaluate the achievements of students from the educational component who are studying in the same course of the

same specialty, according to the points they received.

The ECTS scale is a relative-comparative rating, which establishes the applicant's belonging to the group of better or worse among the reference group of fellow students (faculty, specialty). An "A" grade on the ECTS scale cannot be equal to an "excellent" grade, a "B" grade to a "good" grade, etc. When converting from a multi-point scale, the limits of grades "A", "B", "C", "D", "E" according to the ECTS scale do not coincide with the limits of grades "5", "4", "3" according to the traditional scale. Acquirers who have received grades of "FX" and "F" ("2") are not included in the list of ranked acquirers. The grade "FX" is awarded to students who have obtained the minimum number of points for the current learning activity, but who have not passed the final examination. A grade of "F" is given to students who have attended all classes in the discipline, but have not achieved a grade point average (3.00) for the current academic activity and are not admitted to the final examination.

Applicants who study in one course (one specialty), based on the number of points scored in the discipline, are ranked on the ECTS scale as follows:

Conversion of the traditional grade from the discipline and the sum of points on the ECTS scale

Evaluation on the ECTS scale	Statistical indicator
A	Top 10% achievers
B	The next 25% of earners
C	The next 30% of earners
D	The next 25% of earners
E	The next 10% of earners

10. Methodological support:

- Working program of the discipline
- The syllabus of the discipline
- Textbooks:
- Multimedia presentations
- Situational clinical tasks
- Methodical development of practical classes
- Electronic bank of test tasks by divisions of the discipline

- Educational and methodical literature: Forensic medicine: textbook / Edited by V.D. Mishalov, - Chernivtsi: "Misto" 2018. - 572

11. List of questions to the practical classes.

1. Organisational and procedural basis of forensic medical examination in Ukraine. Rights, duties and responsibilities of a forensic expert. Forensic medical documentation.
2. Forensic medical examination - the subject and objectives of the field, objects

of examination, regulatory legal documents, documentation. Structure of the Bureau of Forensic Medicine.

3.Methods of conducting forensic medical examination. Structure of the "Expert's Opinion". Requirements for the execution of conclusions and the procedure for their signature. Responsibility of the expert. Involvement of consulting physicians.

4.Examination of the scene - tasks of the doctor during the examination of the corpse at the place of its discovery, documentation, scheme of description of the corpse at the scene, rules for the removal of material evidence of biological origin.

5.Blunt force trauma. Classification of blunt objects. Types of bodily injuries and the mechanism of their cause by blunt objects. Forensic significance of abrasions.

6.Damage by blunt objects. Classification of blunt objects. Types of bodily injuries and the mechanism of their cause by blunt objects. Forensic significance of bruises.

7.Damage by blunt objects. Classification and differential diagnosis of wounds caused by blunt objects.

8.Damage by sharp objects. Classification of sharp objects and wounds caused by them. Differential diagnosis of cut and chopped wounds.

9.Injuries caused by sharp objects. Classification of sharp objects and wounds that caused them. Signs of a stab wound. The main and additional incision and its forensic significance.

10.Forensic traumatology. The nature, mechanism of occurrence and forensic significance of fractures of the ribs, spine, bones of the facial skull. Types of fractures. Direct and indirect fractures.

11.Traumatism and its types. Falls from a height - types of falls, features of the scene of the accident and examination in these cases. Falling on a plane.

12.Determination of viability and prescription of injuries in forensic medicine.

13.Forensic traumatology. Nature, mechanism of occurrence and forensic significance of fractures of flat and tubular bones.

14.Forensic medical examination of death and injuries caused by falling from a height, their differential diagnosis with auto trauma.

15.Definition of the term "car accident". Specific, characteristic and uncharacteristic injuries as a result of a car accident. Forensic medical examination of cases of a person falling out of the car cab.

16.Types of road traffic injuries. Forensic medical examination of cases of a car hitting a pedestrian. The value of bumper fracture.

17.Types of road traffic injuries. Forensic medical examination of cases of moving the body with a car wheel.

18.Types of road traffic injuries. Forensic medical examination of cases of injury to the driver and passenger inside the car.

19.Classification of transport trauma. Forensic medical examination of motorcycle trauma. Classification and types of motorcycle trauma. Specific, characteristic and uncharacteristic injuries in these cases.

20.Forensic medical examination of railway trauma. Issues to be resolved in the forensic medical examination of this type of injury.

21. Gunshot injuries. Determination of the entrance and exit wounds on the skin and bones. Types of bullet wound channels. Determination of the distance of the shot. Vinogradov's phenomenon.
22. Classification of firearms. Forensic examination of injuries caused by hunting weapons. Damage by shot. Determination of the entrance and exit holes, distance of the shot.
23. Explosive trauma. Features of forensic medical examination of victims of explosion. The range of issues to be solved by a forensic expert.
24. Gunshot injuries. Laboratory methods of research in the examination of gunshot wounds and their capabilities.
25. Forensic medical and forensic research methods and their capabilities.
26. Identification studies of instruments of trauma. Possibilities of identification studies of corpse bones. Establishment of identity by dental status.
27. Definition of the term "bodily injury". Loss of an organ or loss of organ function - types of injuries, assessment of severity, features of forensic examination of these injuries.
28. Forensic medical examination of living persons. Classification of the severity of bodily injuries and their qualifying features.
29. Forensic medical examination of living persons. Signs of severe bodily injury. List of injuries that are life-threatening.
30. Forensic medical examination of living persons. Qualifying signs of minor injuries and injuries of moderate severity.
31. Forensic medical examination of living persons. Types of general and professional working capacity, the procedure for establishing its loss.
32. Forensic medical examination of the state of health, simulation, agitation, artificial diseases.
33. Forensic medical examination of clothing and footwear as a result of traumatic injury.
34. Forensic examination of instruments of trauma, issues that can be resolved during forensic examination.
35. The use of infrared and ultraviolet lighting in the case of laboratory studies of traumatic injuries.
36. Forensic examination of bloodstains on clothing and instruments of trauma.
37. Forensic trace examination of trauma objects and its possibilities.
38. Forensic examination of self-injury and features of such examinations.
39. Differential diagnosis of falls from a height and road traffic injuries.
40. Differential diagnosis of gunshot wounds and stab wounds from sharp objects.

List of practical skills, acquiring of which is controlled during the differential test from subject "Forensic medicine"

1. Apply the provisions of law in medical practice
2. Demonstrate the skills of description and seizure of the material evidences of the biological origin.

3. Demonstrate the ability to describe the body injuries
4. Demonstrate the ability to perform the forensic-medical examination of the victim, accused and other persons
5. Demonstrate the ability to perform forensic-medical examination of the corpse and detect the cause of the violent death

12. Recommended Literature

1. B.V. Mykhailychenko, A.M.Biliakov, I.G. Savka. Forensic medicine: Textbook. –Kyiv: AUS Medicine Publishing, 2019. – 224 p.;
2. Franchuk V.V. Forensic Medicine : practical guide / V.V. Franchuk. – Ternopil : TSMU, 2011. – 204 p.
3. Journal of Clinical Forensic Medicine ##

13. Electronic information resources

1. <https://zakon.rada.gov.ua/laws/show/4651-17#Text>
2. <https://zakon.rada.gov.ua/laws/show/4038-12#Text>
3. <https://zakon.rada.gov.ua/laws/show/z0248-95#Text>
4. <https://zakon.rada.gov.ua/laws/show/2341-14#Text>
5. <http://moz.gov.ua> – [Ministry of Health of Ukraine](#)
6. www.ama-assn.org - [American Medical Association](#) / American Medical Association
7. www.who.int - [World Health Organization](#)
8. www.dec.gov.ua/mtd/home/ - [State Expert Center of the Ministry of Health of Ukraine](#)
9. <http://bma.org.uk> - British Medical Association