

№ ЛД-16 ИН

**Federal state budgetary educational institution higher education
«NORTH OSSETIAN STATE MEDICAL ACADEMY»
Ministry of health of the Russian Federation**



WORKING PROGRAM OF DISCIPLINE

«TRAUMATOLOGY, ORTHOPEDICS»

the main professional educational program of higher education is the specialty program
in the specialty 31.05.01 General Medicine,
approved on 24.05.2023

Form of education: full - time

The period of development of MPEP HE 6 years

Department of Traumatology, Orthopedics

Vladikavkaz, 2023

When developing the work program, the disciplines are based on:

1. Federal state educational standard for the specialty 31.05.01 General Medicine, approved by the Ministry of education and science of the Russian Federation «09» February 2016 №95
2. Curriculum general professional educational program of higher education по for the specialty 31.05.01 General Medicine,
ЛД-16—04-18 ИИ
ЛД-16—05-19 ИИ
ЛД-16—06-20 ИИ, approved by the Academic Council of the Federal State Budgetary Educational Institution of the Ministry of Health of the Russian Federation on 24 May 2023, Protocol No. 8

The working program of the discipline was approved at the meeting of the Department of Traumatology and Orthopedics on May 22, 2023, Protocol No. 10

The working program of the discipline was approved at the meeting of the central coordinating educational and Methodological Council on May 23, 2023, Protocol No. 5.

The working program of the discipline was approved by the Academic Council Federal State Budgetary Educational Institution of the Ministry of Health of the Russian Federation on May 24, 2023, Protocol No. 8

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Content of the work program

1. Name of discipline;
2. The list of planned results of training in the discipline, correlated with the planned results of the development of the educational program;
3. Indication of the place of discipline in the structure of the educational program;
4. The volume of discipline in credits indicating the number of academic or astronomical hours allocated for contact work of students with a teacher (by type of training sessions) and for independent work of students;
5. The content of the discipline, structured by topics (sections) with an indication of the allotted number of academic or astronomical hours and types of training sessions;
6. The list of educational and methodological support for independent work of students in the discipline;
7. evaluation tools for interim certification of students in the discipline;
8. The list of basic and additional educational literature necessary for the development of the discipline;
9. The list of resources of the information and telecommunication "internet" (hereinafter-the "internet") necessary for the development of the discipline;
10. Methodical instructions for students on the development of the discipline;
11. The list of information technologies used in the implementation of the educational process in the discipline, including a list of software and information reference systems (if necessary);
12. Description of the material and technical base necessary for the implementation of the educational process in the discipline.
13. Conduct educational activities with the use of e-learning and distance educational technologies

1. Name of the discipline

The discipline "Traumatology, orthopedics" forms a student's competence-based approach to the treatment of patients with pathology of the musculoskeletal system based on modern knowledge of the etiology, pathogenesis of orthopedic diseases and traumatic injuries.

2. The list of planned results of training in the discipline "Traumatology, orthopedics" and the results of the development of the educational program

№ №	Number/ index of competence	Content of the discipline (or its sections)	The learning outcomes of the		
			know	Be able to	own
1	2	3	4	5	6
1	GPC-9 GPC-11 PC-5 PC-6	Features of examination of patients with injuries and diseases of the musculoskeletal system. Traumatic illness.	the main issues of traumatism, the organization of traumatology and orthopedic care in Russia; modern methods of diagnosis of injuries and diseases of the musculoskeletal system	assess the severity of injuries and diseases of the musculoskeletal system and decide on the place of further treatment; the method of identifying life-threatening (vital) disorders: traumatic shock; acute blood loss	the ability to hospitalize a patient with a musculoskeletal system injury (make a decision on the need for hospitalization), determine the order of hospitalization of victims according to the severity of the condition in case of mass lesions, determine the place of hospitalization of the patient depending on the existing injuries methods of examination of patients with injuries of the musculoskeletal system; make a preliminary diagnosis based on clinical signs of limb fracture
2	GPC -9 GPC -11 PC-5 PC-6 PC -9 PC -10	Regeneration of bone tissue. Principles and methods of treatment of bone fractures	general principles of treatment of injuries and diseases of the musculoskeletal system	apply general principles of treatment of injuries and diseases of the musculoskeletal system; provide first aid for injuries and diseases of the musculoskeletal system;	methods of examination of patients with injuries of the musculoskeletal system; it is necessary to apply an aseptic bandage on a soft tissue wound and on a wound with open limb fractures;

				<p>participate in the provision of first aid for injuries of the musculoskeletal system in mass disasters;</p> <p>the method of anesthesia of the fracture site of the diaphysis of long tubular bones</p>	<p>the method of providing medical care at the scene of a fracture, dislocation, vascular damage;</p> <p>to stop external bleeding by temporary means: by pressing the vessel in the wound, by pressing the vessel throughout in typical places: the brachial artery;</p> <p>femoral artery;</p> <p>temporal artery;</p> <p>common carotid artery; by applying a pressure bandage;</p> <p>fixation of the limb in a certain position;</p> <p>tamponade of the wound;</p> <p>applying a clamp to a bleeding vessel;</p> <p>the method of transport immobilization for fractures and dislocations by service means (Dieterichs tire, Kramer tire, kerchief), and by improvised means.</p>
3	<p>PC-5 PC-6 PC -9 PC -14</p>	<p>Injuries to the upper arm, shoulder, sternum and ribs</p>	<p>methods of examination of patients with injuries of the collarbone, shoulder, traumatic dislocations of the shoulder;</p> <p>methods of rehabilitation of patients with the most common orthopedic diseases and injuries</p>	<p>to make a preliminary diagnosis based on clinical signs of a fracture of the collarbone, shoulder, dislocation of the shoulder of the collarbone, shoulder, traumatic dislocations of the shoulder</p>	<p>the method of making a preliminary diagnosis of "dislocation" of the shoulder;</p> <p>diagnosis of rupture of the biceps tendon of the shoulder;</p> <p>provide first aid for injuries of the collarbone, shoulder;</p> <p>possess the ability to give the correct position to a patient with injuries to the collarbone, shoulder</p>

4	PC-5 PC-6 PC -9 PC -14	Forearm and hand injuries	<p>methods of examination of patients with injuries of the elbow joint, forearm;</p> <p>methods of rehabilitation of patients with the most common orthopedic diseases and injuries</p> <p>methods of examination of patients with hand injuries;</p> <p>methods of rehabilitation of patients with the most common orthopedic diseases and injuries</p>	<p>make a preliminary diagnosis based on the clinical signs of damage to the elbow joint, forearm</p> <p>make a preliminary diagnosis based on the clinical signs of damage to the forearm and hand</p>	<p>the method of making a preliminary diagnosis of "dislocation" of the forearm, hand, fingers;</p> <p>provide first aid for injuries of the elbow joint, forearm;</p> <p>possess the ability to give the correct position to a patient with injuries to the elbow joint, forearm;</p> <p>skills to apply a plaster splint to the distal part of the upper limb;</p> <p>skills to assess the condition of the limb in a plaster cast;</p> <p>skills of removing a plaster cast in a threatening condition of the limb;</p> <p>skills of removing skeletal traction.</p> <p>the method of making a preliminary diagnosis of the hand, fingers;</p> <p>provide first aid for hand injuries;</p> <p>possess the ability to give the correct position to a patient with injuries to the elbow joint, forearm;</p> <p>skills to apply a plaster splint to the distal part of the upper limb;</p> <p>skills to assess the condition of the limb in a plaster cast;</p> <p>skills of removing a plaster cast in a threatening condition of the limb;</p> <p>possess the ability to give the correct position to a patient</p>
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					with hand injuries
5	PC-5 PC-6 PC -9 PC -14	Fractures of the pelvic bones. Spinal injuries	methods of examination of patients with injuries of the musculoskeletal system; methods of rehabilitation of patients with the most common orthopedic diseases and injuries	make a preliminary diagnosis based on clinical signs of pelvic bone injuries make a preliminary diagnosis based on clinical signs of spinal injuries	the method of making a preliminary diagnosis is a pelvic fracture; provide first aid in case of pelvic bone fracture; possess the ability to give the correct position to a patient with pelvic injuries. the method of examination of patients with injuries of the musculoskeletal system: to make a preliminary diagnosis based on clinical signs: spinal fracture; provide first aid for spinal injuries; possess the ability to give the correct position to a patient with spinal injuries
6	PC-5 PC-6 PC -9 PC -14	Hip and hip joint injuries	methods of examination of patients with injuries of the musculoskeletal system; methods of rehabilitation of patients with the most common orthopedic diseases and injuries	make a preliminary diagnosis based on the clinical signs of hip and hip joint injuries	the method of examination of patients with injuries of the musculoskeletal system: to make a preliminary diagnosis based on clinical signs: hip fracture , hip dislocation; provide first aid for hip and hip joint injuries; possess the ability to give the correct position to a patient with hip and hip joint injuries, the skills of removing skeletal traction
7	PC-5 PC-6 PC -9	Injuries and diseases of the knee joint	methods of examination of patients with	make a preliminary diagnosis based	the method of examination of patients with injuries

	PC -14		injuries of the musculoskeletal system; methods of rehabilitation of patients with the most common orthopedic diseases and injuries	on the clinical signs of knee joint injuries	of the musculoskeletal system: to make a preliminary diagnosis based on clinical signs: dislocation of the lower leg; to provide first aid for knee joint injuries; possess the ability to give the correct position to a patient with knee joint injuries, the skills of removing a plaster cast in a threatening condition of the limb
8	PC-5 PC-6 PC -9 PC -14	Lower leg and foot injuries	methods of examination of patients with injuries of the musculoskeletal system; methods of rehabilitation of patients with the most common orthopedic diseases and injuries	make a preliminary diagnosis based on clinical signs of lower leg and foot injuries	the method of making a preliminary diagnosis of Achilles tendon rupture; make a preliminary diagnosis based on clinical signs: fracture of the lower leg and foot bones, dislocation of the foot; provide first aid for injuries of the lower leg and foot; possess the ability to give the correct position to a patient with leg and foot injuries; it is necessary to apply a plaster splint on the distal part of the lower extremities; skills to assess the condition of the limb in a plaster cast; skills of removing a plaster cast in a threatening condition of the limb; skills of removing skeletal traction;

9	PC-5 PC-6 PC -9 PC -14	Complications in the treatment of fractures - ungrown fractures, false joints. Post-traumatic osteomyelitis.	the most common complications in traumatology and orthopedics and methods of their prevention methods of rehabilitation of patients with the most common orthopedic diseases and injuries	assess the severity of injuries and diseases of the musculoskeletal system and decide on the place of further treatment	refer patients with the consequences of injury for consultation or hospitalization
10	PC-5 PC-6 PC -9 PC -14	Congenital orthopedic diseases in children: congenital hip dislocation, congenital clubfoot, congenital torticollis.	modern methods of diagnosis of diseases of the musculoskeletal system; methods of rehabilitation of patients with the most common orthopedic diseases	make a preliminary diagnosis based on clinical signs: congenital hip dislocation, congenital clubfoot, congenital torticollis.	the method of examination of patients with the consequences of injuries and diseases of the musculoskeletal system: to assume typical orthopedic diseases: congenital dislocation of the hip; congenital clubfoot; congenital torticollis; refer for consultation children with congenital hip dislocation, congenital clubfoot, congenital muscular torticollis
11	PC-5 PC-6 PC -9 PC -14	Degenerative diseases of the spine.	modern methods of diagnosis of diseases of the musculoskeletal system; methods of rehabilitation of patients with the most common orthopedic diseases	make a preliminary diagnosis based on clinical signs: scoliosis; osteochondrosis of the spine	the method of examination of patients with the consequences of injuries and diseases of the musculoskeletal system: to assume typical orthopedic diseases: scoliosis; osteochondrosis of the spine
12	PC-5 PC-6 PC -9 PC -14	Acquired orthopedic diseases in adults: deforming	modern methods of diagnosis of diseases of the musculoskeletal system;	to make a preliminary diagnosis based on clinical signs:	methods of examination of patients with diseases of the musculoskeletal

	arthrosis, static deformities of the foot - hallux valgus of the first finger, hammer-like fingers, longitudinal and transverse flat feet.	methods of rehabilitation of patients with the most common orthopedic diseases	deforming arthrosis, static deformities of the foot - hallux valgus of the first finger, hammer-like fingers, longitudinal and transverse flat feet	system; to assume typical orthopedic diseases: deforming arthrosis of large joints; static deformations of the feet
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3. 3. The place of the discipline "Traumatology, orthopedics" in the structure of the educational program

The discipline "Traumatology, orthopedics" refers to the basic part of Block 1 of the Federal State Educational Standard of the specialty " General Medicine ". Types of professional activities that underlie the teaching of this discipline:

1. medical;
2. organizational and managerial;
3. scientific research

4. The amount of discipline

№ №	Kind of work	Total credits	Total hours	Semesters	
				10	11
				hours	hours
1	2	3	4	5	6
1	Contact work of students with teacher (total), including:	3,6	130	78	52
2	Lectures (L)	-	32	18	14
3	Practical training (Pt)	-	98	60	38
4	Seminars (S)	-	-	-	-
5	Laboratory work (LW)		-	-	-
6	Independent work of the student (IWS)	1,4	50	30	20
7	Type of intermediate certifications	test (t)	-	-	-
		exam (e)	1	36	-
8	Total: laboriousness	hours	216	216	36
		credits	6		3

5. Content of the discipline

№	№ semester	Name of the topic (section) of the discipline	Types of training activities (in hours)				Forms of current performance monitoring
			L	PT	IWS	Total	
1	2	3	4	5	6	7	8
l, T, St	10	Features of examination of patients with injuries and diseases of the musculoskeletal system. Traumatic illness. Classification, clinic, diagnosis of bone fractures	4	14	8	26	l, T, St
							l, T, St
2	10	Regeneration of bone tissue. Principles and methods of treatment of bone fractures	2	10	4	16	l, T, St
3	10	Injuries to the upper arm, shoulder, sternum and ribs	1	8	2	11	l, T, St
4	10	Injuries to the forearm joint and hand	3	8	4	15	l, T, St
5	10	Fractures of the pelvic bones. Spinal injuries	2	10	4	16	l, T, St
6	10	Hip and hip joint injuries	2	10	2	14	l, T, St
7	10	Injuries and diseases of the knee joint	2	10	4	16	l, T, St
8	10	Lower leg and foot injuries	2	8	2	12	l, T, St
9	11	Complications in the treatment of fractures - ungrown fractures, false joints. Post-traumatic osteomyelitis.	2	4	4	10	l, T, St
10	11	Congenital orthopedic diseases in children: congenital hip dislocation, congenital clubfoot, congenital torticollis.	4	8	6	18	l, T, St
11	11	Degenerative diseases of the spine.	4	8	4	16	l, T, St
12	11	Acquired orthopedic diseases in adults: deforming arthrosis, static deformities of the foot - hallux valgus of the first finger, hammer-like fingers, longitudinal and transverse flat feet.	4	18	6	28	l, T, St
exam							36
Итого			36	32	98	50	216

Note: I-interview, T-tests, St-situational tasks.

6. The list of educational and methodological support for independent work of students in the discipline

№/	№ semester	The name of the educational-methodical development
1	10	Sabaev S.S., Educational and methodical manual "Features of examination of patients with injuries and diseases of the musculoskeletal system. Traumatic illness"
2	10	Sabaev S.S., Educational and methodical manual "Regeneration of bone tissue. Principles and methods of treatment of bone fractures"
3	10	Sabaev S.S., Teaching aid " Injuries of the collarbone, shoulder, traumatic dislocations of the shoulder"
4	10	Sabaev S.S., Teaching aid "Injuries of the elbow joint, forearm"
5	10	Sabaev S.S., Teaching aid. "Fractures of the radius in a typical place. Brush damage"
6	10	Sabaev S.S., Teaching aid "Fractures of pelvic bones"
7	10	Sabaev S.S., Teaching aid "Spinal injuries"
8	10	Sabaev S.S., Training manual "Hip and hip joint injuries"
9	10	Sabaev S.S., Training manual "Knee joint injuries and diseases"
10	10	Sabaev S.S., Teaching aid "Injuries of the lower leg and foot"
11	11	Sabaev S.S., Teaching aid "Congenital orthopedic diseases in children: congenital hip dislocation, congenital clubfoot, congenital torticollis"
12	11	Sabaev S.S., Educational and methodical manual "Degenerative diseases of the spine"
13	11	Sabaev S.S., Educational and methodical manual "Acquired orthopedic diseases in adults: deforming arthrosis, static deformities of the foot - hallux valgus of the first finger, hammer-shaped fingers, longitudinal and transverse flat feet"

7. Evaluation tools for interim certification of students in the discipline «Traumatology, orthopedics»

№	List of competences	№ semester	Indicator assessments	Evaluation criterion(s)	Grading scale	Name of evaluation tools
1	2	3	4	5	6	7
1.	GPC -9	10	see the standard for assessing the quality of education, approved. By Order of the Federal State Budgetary Educational Institution of the Ministry of Health of the Russian Federation dated 10.07.2018, No.264/o	see the standard for assessing the quality of education, approved. By Order of the Federal State Budgetary Educational Institution of the Ministry of Health of the Russian Federation dated	see the standard for assessing the quality of education, approved. By Order of the Federal State Budgetary Educational Institution of the Ministry of Health of the Russian Federation dated	tickets to the module; tests; Situational challenges

				10.07.2018, No.264/o	10.07.2018, No.264/o	
2.	GPC -11	10	see the standard for assessing the quality of education, approved. By Order of the Federal State Budgetary Educational Institution of the Ministry of Health of the Russian Federation dated 10.07.2018, No.264/o	see the standard for assessing the quality of education, approved. By Order of the Federal State Budgetary Educational Institution of the Ministry of Health of the Russian Federation dated 10.07.2018, No.264/o	see the standard for assessing the quality of education, approved. By Order of the Federal State Budgetary Educational Institution of the Ministry of Health of the Russian Federation dated 10.07.2018, No.264/o	tickets to the module; tests; Situational challenges
3.	PC-5	10,11	see the standard for assessing the quality of education, approved. By Order of the Federal State Budgetary Educational Institution of the Ministry of Health of the Russian Federation dated 10.07.2018, No.264/o	see the standard for assessing the quality of education, approved. By Order of the Federal State Budgetary Educational Institution of the Ministry of Health of the Russian Federation dated 10.07.2018, No.264/o	see the standard for assessing the quality of education, approved. By Order of the Federal State Budgetary Educational Institution of the Ministry of Health of the Russian Federation dated 10.07.2018, No.264/o	tickets to the module; tests; Situational challenges
4.	PC-6	10,11	see the standard for assessing the quality of education, approved. By Order of the Federal State Budgetary Educational Institution of the Ministry of Health of the Russian Federation dated 10.07.2018, No.264/o	see the standard for assessing the quality of education, approved. By Order of the Federal State Budgetary Educational Institution of the Ministry of Health of the Russian Federation dated 10.07.2018, No.264/o	see the standard for assessing the quality of education, approved. By Order of the Federal State Budgetary Educational Institution of the Ministry of Health of the Russian Federation dated 10.07.2018, No.264/o	tickets to the module; tests; Situational challenges
5.	PC-9	10,11	see the standard for assessing the quality of education, approved. By Order of the Federal State Budgetary	see the standard for assessing the quality of education, approved. By Order of the Federal State	see the standard for assessing the quality of education, approved. By Order of the Federal State	tickets to the module; tests; Situational challenges

			Educational Institution of the Ministry of Health of the Russian Federation dated 10.07.2018, No.264/o	Budgetary Educational Institution of the Ministry of Health of the Russian Federation dated 10.07.2018, No.264/o	Budgetary Educational Institution of the Ministry of Health of the Russian Federation dated 10.07.2018, No.264/o	
6.	PC-10	10	see the standard for assessing the quality of education, approved. By Order of the Federal State Budgetary Educational Institution of the Ministry of Health of the Russian Federation dated 10.07.2018, No.264/o	see the standard for assessing the quality of education, approved. By Order of the Federal State Budgetary Educational Institution of the Ministry of Health of the Russian Federation dated 10.07.2018, No.264/o	see the standard for assessing the quality of education, approved. By Order of the Federal State Budgetary Educational Institution of the Ministry of Health of the Russian Federation dated 10.07.2018, No.264/o	tickets to the module; tests; Situational challenges
7.	PC-14	10,11	see the standard for assessing the quality of education, approved. By Order of the Federal State Budgetary Educational Institution of the Ministry of Health of the Russian Federation dated 10.07.2018, No.264/o	see the standard for assessing the quality of education, approved. By Order of the Federal State Budgetary Educational Institution of the Ministry of Health of the Russian Federation dated 10.07.2018, No.264/o	see the standard for assessing the quality of education, approved. By Order of the Federal State Budgetary Educational Institution of the Ministry of Health of the Russian Federation dated 10.07.2018, No.264/o	tickets to the module; tests; Situational challenges

8. The list of basic and additional educational literature necessary for the development of the discipline

п/№	Наименование	Автор (ы)	Год, место издания	Кол-во экземпляров	
				в биб-лиотеке	на кафедре
1	2	3	4	5	6
Основная литература					
1.	Травматология и ортопедия: учебник с компакт-диском	Котельников Г.П., Миронов С.П., Мирошниченко В.Ф.	М.: ГЭОТАР-Медиа, 2006	329	-
				http://www.studmedlib.ru/book/ISBN9785970413760.html	
2.	Травматология и ортопедия: учебник	ред. Н.В. Корнилов	М. : ГЭОТАР-Медиа, 2011	48	-
				http://www.studmedlib.ru/book/ISBN9785970430859.html	
Дополнительная литература					
3.	Травматология: национальное руководство	ред. Г.П. Котельников	М. : ГЭОТАР-Медиа, 2008	12	-
4.	Травматология, ортопедия и восстановительная хирургия	М.В. Казарезов, И. В. Бауэр, А.М. Королева.	ИГМА, 2001-288с.	1	-
5.	Физикальное исследование костно-мышечной системы. Иллюстрированное руководство.	Гросс Д., Фетто Д., Роузен Э.	М. :Бином, 2011	-	Электронный вариант
6.	Травматология и ортопедия : учебник	ред. Г.С. Юмашев	М. : Медицина, 1990	23	-
7.	Реабилитация в травматологии и ортопедии	Епифанов В.А., Епифанов А.В.	М. : ГЭОТАР-Медиа, 2015	http://www.studmedlib.ru/book/ISBN9785970434451.html	
8.	Закрытые травмы конечностей	Котельников Г.П., Мирошниченко В.Ф.	М. : ГЭОТАР-Медиа, 2009	http://www.studmedlib.ru/book/ISBN9785970411421.html	

СОГЛАСОВАНО
Зав. библиотек

9. The list of resources of information and telecommunication network "Internet", necessary for the development of the discipline

- Russian Education Federal Portal <http://www.edu.ru>
- Catalog of medical documents <http://www.infamed.com/katalog/>
- Traumatology and orthopedics. Computer analysis in traumatology <http://www.comail.ru/~diamorph/traum.htm>
- Orthopedics for everyone <http://www.donpac.ru/usr/golub/>
- Children's orthopedics of the XXI century. New methods of treatment <http://www.ortho.newmail.ru>
- Scoliosis <http://scolios.nafod.ru>
- Joint replacement <http://prosthetics.8m.com>
- Otopedia, Traumatology and Telemedicine - forum <http://orto.i.am>

- Surgical infection -<http://www.rusmedserv.com/surginfect/>
- Medfind.ru - reference and search engine for medicine -[http://medfind.ru /](http://medfind.ru/)
- Scientific electronic library eLibrary.RU -<http://elibrary.ru/defaultx.asp>
- A guide to the medical resources of the Internet - http://www.nlr.ru/res/inv/ic_med/index.php

10. Methodical instructions for students on the development of the discipline

The training consists of classroom classes (120 hours), including a lecture course and practical classes, and independent work (60 hours). The main study time is allocated for mastering the basic theoretical knowledge and practical skills on prevention, diagnosis, examination methods, first aid to patients with injuries and diseases of the musculoskeletal system. When studying the discipline, it is necessary to use the basic and additional recommended literature and master practical skills in providing first aid for injuries and diseases of the musculoskeletal system.

Practical classes are conducted in the form of answers to tests, oral questioning, solving situational problems, demonstrating skills in providing medical care on a robot simulator, attending surgical interventions for injuries of the musculoskeletal system.

In accordance with the requirements of the Federal State Educational Standard of the Second World War, active and interactive forms of classes (videos, situational tasks, independent extracurricular work) are widely used in the educational process. The proportion of classes conducted in interactive forms is at least 20% of classroom classes.

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11. The list of information technologies used in the implementation of the educational process in the discipline

Semester	Occupation L, PT, IWS	Educational technologies used (active, interactive)	amount of hours	% classes in interactive form	List of software
10,11	L	Set of slides, videos, educational films for a traditional lecture	32		Microsoft Office PowerPoint; Internet Explorer
10,11	PT	A set of questions and tasks for a practical task, a set of situational tasks for CS, a set of case histories for the analysis of clinical cases.	98	20	Microsoft Office; PowerPoint;

10,11	IWS	Questions and tasks for independent work, subject of presentations	50		Microsoft Office Internet Exploer
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12. Description of the material and technical base necessary for the implementation of the educational process in the discipline

no./	equipment Name	Quantity	Technical condition
1	2	3	4
Special equipment			
1.	Computer	3	satisfy.
2.	Laptop	2	satisfy.
3.	The projector	2	satisfy.
4.	Copying equipment	2	satisfy.
Dummies			
5.	Anatomical model of the hip	1	satisfy.
6.	Anatomical model of the wrist / hand	1	satisfy.
7.	Anatomical model of the knee	1	satisfy.
8.	Anatomical model elbow	1	satisfy.
9.	Anatomical model shoulder	1	satisfy.
10.	Anatomical model of the foot/ankle	1	satisfy.
11.	Functional anatomical model of the knee joint	1	satisfy.
Trainer			
12.	Complex-simulator KTNP-01 - "ELTEK"	1	satisfy.

13. Conducting educational activities with the use of e-learning and distance educational technologies

In conditions of introduction of restrictive measures (quarantine) associated with an unfavorable epidemiological situation, the threat of the spread of a new coronavirus infection, and

other force majeure events that do not allow conducting training sessions in person, it is possible to study this discipline or part of it using e-learning and distance education technologies.

Teaching the discipline in the above situations will be carried out through the development of an electronic course with access to video lectures and interactive course materials: presentations, articles, additional materials, tests and various tasks. When conducting training sessions, current monitoring of academic performance, as well as intermediate certification of students, the Academy's electronic information and educational environment platforms and/or other e-learning systems recommended for use in the Academy can be used, such as Moodle, Zoom, Webinar etc.

Lectures can be presented in the form of audio, video files, "live lectures", etc. Seminars and practical classes can be held on-line in both synchronous and asynchronous modes. Seminars can be held in the form of web conferences.