

№ЛД-21 ИИ

**Federal State Budgetary Educational Institution of Higher Education
«North-Ossetia State Medical Academy»
of the Ministry of Healthcare of the Russian Federation**



APPROVED

Rector of FSBEI HE NOSMA
MOH Russia

 O.V. Remizov

«24» May 2023

EDUCATIONAL TRAINING PROGRAM OF DISCIPLINE

«HOSPITAL SURGERY»

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

Form of education _____ full-time _____

The period of development _____ 6 _____

Department of _____ Surgery diseases №2

Vladikavkaz, 2023 г.

When developing an educational training program, the discipline is based on:

1. Federal State Educational Standard of Higher Education in the specialty 31.05.01 General Medicine, approved by the Ministry of Education and Science of the Russian Federation August 12, 2020 No. 988.
2. The academic plan of OPOP VO in the specialty 31.05.01 General medicine:
ЛД-21-01-21ИИ
ЛД-21-02-22ИИ,
ЛД-21-03-23ИИ, was approved by the Scientific Council of the State Medical University of the Federal State Budgetary Educational Institution of Higher Education «North-Ossetia State Medical Academy» of the Ministry of Healthcare of the, Russian Federation from «24» May, 2023, № 8.

The educational training program of the discipline was approved at a meeting of the department of Surgical Diseases from «19» May, 2023, № 10.

The educational training program of the discipline was approved at a meeting of the central coordinating training and methodological council from «23» May 2023, № 5.

The educational training program of the discipline was approved by the Scientific Council of the State Medical University of the Federal State Budgetary Educational Institution of Higher Education «North-Ossetia State Medical Academy» of the Ministry of Healthcare of the, Russian Federation from «24» May, 2023, № 8.

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Content of the educational program

1. name of the discipline;
2. list of the planned learning outcomes in the discipline, correlated with the planned results of the study program;
3. the place of discipline in the structure of the educational program;
4. the amount of discipline in credit units, indicating the number of academic or astronomical hours allocated for contact work of students with a teacher (by type of training) and for independent work of students;
5. the content of the discipline, structured by topics (sections) with an indication of the number of academic or astronomical hours allocated for them and types of training;
6. a list of educational and methodological support for independent work of students in the discipline;
7. evaluation materials for intermediate certification of students in the discipline;
8. a list of basic and additional educational literature necessary for mastering the discipline;
9. a list of resources of the information and telecommunication network "Internet" (hereinafter - the "Internet" network), necessary for mastering the discipline;
10. methodological instructions for students on the development of the discipline;
11. a 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. conducting educational activities using e-learning and distance learning technologies.

2. List of the planned learning outcomes in the discipline, correlated with the planned results of the study program

| №№ п/п | Number /Index of competency | Content of competency (or part of it) | Theme | Competence achievement indicators | Development results | | |
|-----------|-----------------------------------|--|---|--|---|--|---|
| | | | | | To know | To be able to | To have skills of |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 1. | UC-1 | Able to carry out a critical analysis of problem situations based on a systematic approach, develop an action strategy | Colon diseases. Diseases of the rectum. Intestinal obstruction. Peritonitis. Diseases of the lung and pleura. Diseases of the heart and blood vessels. Portal hypertension. Diseases of the thyroid gland. Diseases of the breast. Acute appendicitis. Hernia. Diseases of the gallbladder and ducts. Diseases of the pancreas. Peptic ulcer and duodenal ulcer, gastrointestinal bleeding. Diseases of the operated stomach. Diseases of the esophagus. Diseases of the diaphragm. Diseases of the liver. Diseases of the spleen. Differential diagnosis of jaundice. Intestinal fistulas. Injuries to the chest and abdomen. Endoscopic Surgery. Interventional surgery. | ID-1UC-1 Identifies problem situations and searches for the necessary information to solve problems in the professional field. ID-4UC-1 Develops an action strategy for solving problems in the professional field. | Definition, classification, etiology, pathogenesis, clinical picture, diagnosis, treatment of patients with surgical pathology. | Conduct a survey and examination of patients with surgical diseases, interpret the data of laboratory and special research methods, analyze the information received and make a diagnosis, prescribe treatment and evaluate its results. | Methods for the diagnosis and treatment of surgical diseases. |
| 2. | GPC-1 | Able to implement moral and legal norms, ethical and deontological principles in professional activities. | Colon diseases. Diseases of the rectum. Intestinal obstruction. Peritonitis. Diseases of the lung and pleura. Diseases of the heart and blood vessels. | ID-1 GPC-1 Complies with moral and legal norms in professional activities. ID-2 GPC-1 Expresses professional information in the process of intercultural | Definition, classification, etiology, pathogenesis, clinical picture, | Conduct a survey and examination of patients with surgical diseases, | Methods for the diagnosis and treatment of surgical diseases. |

| | | | | | | | |
|----|------|--|--|--|---|--|---|
| | | | Portal hypertension. Diseases of the thyroid gland. Diseases of the breast. Acute appendicitis. Hernia. Diseases of the gallbladder and ducts. Diseases of the pancreas. Peptic ulcer and duodenal ulcer, gastrointestinal bleeding. Diseases of the operated stomach. Diseases of the esophagus. Diseases of the diaphragm. Diseases of the liver. Diseases of the spleen. Differential diagnosis of jaundice. Intestinal fistulas. Injuries to the chest and abdomen. Endoscopic Surgery. Interventional surgery. | interaction, observing the principles of ethics and deontology. | diagnosis, treatment of patients with surgical pathology. | interpret the data of laboratory and special research methods, analyze the information received and make a diagnosis, prescribe treatment and evaluate its results. | |
| 3. | PC-1 | Able to provide medical care to a patient in urgent or urgent forms. | Colon diseases. Diseases of the rectum. Intestinal obstruction. Peritonitis. Diseases of the lung and pleura. Diseases of the heart and blood vessels. Portal hypertension. Diseases of the thyroid gland. Diseases of the breast. Acute appendicitis. Hernia. Diseases of the gallbladder and ducts. Diseases of the pancreas. Peptic ulcer and duodenal ulcer, gastrointestinal bleeding. Diseases of the operated stomach. Diseases of the esophagus. Diseases of the diaphragm. Diseases of the liver. Diseases of the spleen. | ID-1 PC-1 Reveals clinical signs of conditions requiring emergency medical care. ID-2 PC-1 Carries out measures for the provision of medical care in an emergency form. | Definition, classification, etiology, pathogenesis, clinical picture, diagnosis, treatment of patients with surgical pathology. | Conduct a survey and examination of patients with surgical diseases, interpret the data of laboratory and special research methods, analyze the information received and make a diagnosis, prescribe treatment and evaluate its results. | Methods for the diagnosis and treatment of surgical diseases. |

| | | | | | | | |
|----|-------|--|---|---|---|--|---|
| | | | Differential diagnosis of jaundice. Intestinal fistulas. Injuries to the chest and abdomen. Endoscopic Surgery. Interventional surgery. | | | | |
| 4. | PC -2 | Able to examine a patient in order to establish a diagnosis. | Colon diseases. Diseases of the rectum. Intestinal obstruction. Peritonitis. Diseases of the lung and pleura. Diseases of the heart and blood vessels. Portal hypertension. Diseases of the thyroid gland. Diseases of the breast. Acute appendicitis. Hernia. Diseases of the gallbladder and ducts. Diseases of the pancreas. Peptic ulcer and duodenal ulcer, gastrointestinal bleeding. Diseases of the operated stomach. Diseases of the esophagus. Diseases of the diaphragm. Diseases of the liver. Diseases of the spleen. Differential diagnosis of jaundice. Intestinal fistulas. Injuries to the chest and abdomen. Endoscopic Surgery. Interventional surgery. | ID-1 PC-2 Collects complaints, anamnesis of life and illness of the patient and analyzes the information received. ID-2 PC-2 Conducts a complete physical examination of the patient (examination, palpation, percussion, auscultation) and interprets its results. ID-3 PC-2 Substantiates the necessity and scope of laboratory examination of the patient. ID-4 PC-2 Substantiates the necessity and scope of instrumental examination of the patient. ID-5 PC-2 Substantiates the need to refer the patient for consultations to specialist doctors. ID-6 PC-2 Analyzes the results of the patient's examination, if necessary, justifies and plans the volume of additional studies. ID-7 PC-2 Interprets the results of collecting information about the patient's disease. ID-8 PC-2 Interprets the data obtained during laboratory | Definition, classification, etiology, pathogenesis, clinical picture, diagnosis, treatment of patients with surgical pathology. | Conduct a survey and examination of patients with surgical diseases, interpret the data of laboratory and special research methods, analyze the information received and make a diagnosis, prescribe treatment and evaluate its results. | Methods for the diagnosis and treatment of surgical diseases. |

| | | | | | | | |
|----|-------|---|--|---|---|--|---|
| | | | | <p>examination of the patient.</p> <p>ID-9 PC-2 Interprets the data obtained during the instrumental examination of the patient.</p> <p>ID-10 PC-2 Interprets the data obtained in consultation with the patient by specialist doctors.</p> <p>ID-12 PC-2 Carries out differential diagnostics of diseases of internal organs from other diseases.</p> <p>ID-13 PC-2 Determines the order of the volume, content and sequence of diagnostic measures.</p> <p>ID-14 PC-2 Determines medical indications for the provision of emergency, including emergency specialized, medical care.</p> <p>ID-15 PC-2 Applies medical devices in accordance with the current procedures for the provision of medical, clinical recommendations (treatment protocols) on the provision of medical care, care, taking into account the standards of medical care.</p> | | | |
| 5. | PC -3 | Able to prescribe treatment and monitor its effectiveness and safety. | <p>Colon diseases.</p> <p>Diseases of the rectum. Intestinal obstruction.</p> <p>Peritonitis. Diseases of the lung and pleura.</p> <p>Diseases of the heart and blood vessels.</p> <p>Portal hypertension.</p> <p>Diseases of the thyroid gland.</p> | ID-1 PC-3 Draws up a plan for the treatment of the disease and the patient's condition, taking into account the diagnosis, the patient's age, the clinical picture of the disease in accordance with the current procedures for the | Definition, classification, etiology, pathogenesis, clinical picture, diagnosis, treatment of | Conduct a survey and examination of patients with surgical diseases, interpret the data of | Methods for the diagnosis and treatment of surgical diseases. |

| | | | | | | | |
|----|-------|--|---|---|---|---|---|
| | | | Diseases of the breast. Acute appendicitis. Hernia. Diseases of the gallbladder and ducts. Diseases of the pancreas. Peptic ulcer and duodenal ulcer, gastrointestinal bleeding. Diseases of the operated stomach. Diseases of the esophagus. Diseases of the diaphragm. Diseases of the liver. Diseases of the spleen. Differential diagnosis of jaundice. Intestinal fistulas. Injuries to the chest and abdomen. Endoscopic Surgery. Interventional surgery. | provision of medical care, clinical recommendations (treatment protocols) on the provision of medical care, taking into account the standards of medical care. ID-2 PC-3 Prescribes drugs, medical devices and medical nutrition, taking into account the diagnosis, age and clinical picture of the disease in accordance with the current procedures for the provision of medical care, clinical recommendations (treatment protocols) on the provision of medical care, taking into account the standards of medical care. ID-3 PC-3 Prescribes non-drug treatment taking into account the diagnosis, age and clinical picture of the disease in accordance with the current procedures for the provision of medical care, clinical recommendations (treatment protocols) on the provision of medical care, taking into account the standards of medical care. | patients with surgical pathology. | laboratory and special research methods, analyze the information received and make a diagnosis, prescribe treatment and evaluate its results. | |
| 6. | PC -6 | Able to maintain medical records and organize the activities of the nursing staff at the disposal. | Colon diseases. Diseases of the rectum. Intestinal obstruction. Peritonitis. Diseases of the lung and pleura. Diseases of the heart and blood vessels. Portal hypertension. Diseases of the thyroid gland. | ID-3 PC-6 Works with personal data of patients and medical secrets. ID-5 PC-6 Fills in medical documentation, including in electronic form. ID-6 PK-6 Supervises the performance of official duties | Definition, classification, etiology, pathogenesis, clinical picture, diagnosis, treatment of | Conduct a survey and examination of patients with surgical diseases, interpret the data of | Methods for the diagnosis and treatment of surgical diseases. |

| | | | | | | |
|--|--|---|--|-----------------------------------|---|--|
| | | Diseases of the breast. Acute appendicitis. Hernia. Diseases of the gallbladder and ducts. Diseases of the pancreas. Peptic ulcer and duodenal ulcer, gastrointestinal bleeding. Diseases of the operated stomach. Diseases of the esophagus. Diseases of the diaphragm. Diseases of the liver. Diseases of the spleen. Differential diagnosis of jaundice. Intestinal fistulas. Injuries to the chest and abdomen. Endoscopic Surgery. Interventional surgery. | by the district nurse and other medical. | patients with surgical pathology. | laboratory and special research methods, analyze the information received and make a diagnosis, prescribe treatment and evaluate its results. | |
|--|--|---|--|-----------------------------------|---|--|

3. The place of discipline in the structure of the educational program

The discipline "Hospital surgery" is a compulsory discipline of Block 1 of the Federal State Educational Standard of Higher Education in the specialty "General Medicine».

4. Discipline scope

| № № п/ п | Type of work | Total credits | Total hours | Terms | | |
|-------------------|--|------------------|----------------|-----------|-----------|------------|
| | | | | №9 | №10 | №11 |
| | | | | hours | hours | hours |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1 | Contact work of students with teacher (total), including: | - | 156 | 54 | 24 | 78 |
| 2 | Lectures(L) | - | 38 | 18 | 4 | 16 |
| 3 | Clinical practical classes (PC) | - | 118 | 36 | 20 | 62 |
| 4 | Seminars(S | - | - | - | - | - |
| 5 | Laboratory works (LW) | - | - | - | - | - |
| 6 | Independent student work (ISW) | - | 60 | 18 | 12 | 30 |
| 7 | Type of intermediate attestation | credit(C) | - | - | - | - |
| | | exam (E) | - | 36 | - | 36 |
| 8 | TOTAL | hours | - | 72 | 36 | 144 |
| | | 3ET | 7 | 2 | 1 | 4 |

5. Discipline content

| №/п | № of term | The name of the topic (section) of the discipline | Types of educational activities (in hours) | | | | | Forms of monitoring progress |
|---------------|-----------|--|--|----------|------------|-----------|------------|------------------------------|
| | | | L | LW | PC | ISW | total | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 1 | 9 | Module No. 1. Diseases of the large intestine, intestinal obstruction, peritonitis, diseases of the lungs and pleura, heart and blood vessels, thyroid and mammary glands, diseases of the gallbladder and ducts | 18 | - | 36 | 18 | 72 | |
| 2 | 10 | Module number 2. Appendicitis, abdominal hernia | 4 | - | 20 | 12 | 36 | |
| 3 | 11 | Module No. 3. Diseases of the pancreas, stomach, esophagus and diaphragm, jaundice, intestinal fistulas, chest and abdominal trauma, endoscopic and interventional surgery | 16 | - | 62 | 30 | 108 | |
| TOTAL: | | | 38 | - | 118 | 60 | 216 | |

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

| №/п | № of term | Name of educational and methodological development |
|-----|-----------|---|
| 1 | 2 | 3 |
| 1. | 9 | Nonspecific ulcerative colitis. |
| 2. | 9 | Colon cancer. |
| 3. | 9 | Volvulus of the sigmoid colon (monograph). |
| 4. | 9 | Colon cancer complicated by obstruction (monograph). |
| 5. | 9 | Diseases of the rectum. |
| 6. | 9 | Rectal cancer. |
| 7. | 9 | Rectal cancer complicated by acute obstructive obstruction (monograph). |
| 8. | 9 | Intestinal obstruction. |
| 9. | 9 | Adhesive intestinal obstruction (monograph). |
| 10. | 9 | Peritonitis. |
| 11. | 9 | Diseases of the lungs, pleura and mediastinum. |
| 12. | 9 | Heart disease. |
| 13. | 9 | Diseases of the arteries. |
| 14. | 9 | Diseases of the veins. |
| 15. | 9 | Portal hypertension syndrome. |
| 16. | 9 | Diseases of the thyroid gland. |
| 17. | 9 | Diseases of the breast. |
| 18. | 9 | Acute cholecystitis. |
| 19. | 10 | Acute appendicitis. |
| 20. | 10 | Strangulated abdominal hernia. |
| 21. | 11 | Acute pancreatitis. |
| 22. | 11 | Complications of peptic ulcer disease. |
| 23. | 11 | Perforated stomach and duodenal ulcers. |
| 24. | 11 | Gastrointestinal bleeding. |
| 25. | 11 | Stomach cancer. |
| 26. | 11 | Diseases of the esophagus. |
| 27. | 11 | Parasitic liver diseases. |
| 28. | 11 | Diseases of the spleen. |
| 29. | 11 | Obstructive jaundice. |
| 30. | 11 | Intestinal fistulas. |
| 31. | 11 | Closed and open chest injuries. |
| 32. | 9-11 | Methodical recommendations for performing independent extracurricular work. |
| 33. | 9-11 | Methodological guide for practical training. |

7. Evaluation materials for intermediate certification of students in the discipline

| №/п | List of competencies | № of term | Assessment indicator (s) | Evaluation criterion (s) | Grading scale | Name of EM |
|-----|---|-----------|---|---|--|---|
| 1. | UC-1 GPC-1 PC-1 PC-2 PC-3 PC-6 | 9 | see the standard for assessing the quality of education, approved. By order of the Federal State Budgetary Educational Institution of | see the standard for assessing the quality of education, approved. By order of the Federal State Budgetary Educational Institution of | see the standard for assessing the quality of education, approved. By order of the Federal State Budgetary Educational | Exam tickets; Test tasks; Situational tasks |

| | | | | | | |
|----|---|----|--|--|---|---|
| | | | Higher Education SOGMA of the Ministry of Health of Russia dated 10.07.2018, No. 264 / o | Higher Education SOGMA of the Ministry of Health of Russia dated 10.07.2018, No. 264 / o | Institution of Higher Education SOGMA of the Ministry of Health of Russia dated 10.07.2018, No. 264 / o | |
| 2. | UC-1 GPC-1 PC-1 PC-2 PC-3 PC-6 | 10 | see the standard for assessing the quality of education, approved. By order of the Federal State Budgetary Educational Institution of Higher Education SOGMA of the Ministry of Health of Russia 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 Higher Education SOGMA of the Ministry of Health of Russia 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 Higher Education SOGMA of the Ministry of Health of Russia dated 10.07.2018, No. 264 / o | Exam tickets; Test tasks; Situational tasks |
| 3. | UC-1 GPC-1 PC-1 PC-2 PC-3 PC-6 | 11 | see the standard for assessing the quality of education, approved. By order of the Federal State Budgetary Educational Institution of Higher Education SOGMA of the Ministry of Health of Russia 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 Higher Education SOGMA of the Ministry of Health of Russia 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 Higher Education SOGMA of the Ministry of Health of Russia dated 10.07.2018, No. 264 / o | Exam tickets; Test tasks; Situational tasks |

8. List of basic and additional educational literature necessary for mastering the discipline

| № | Name | The author(s) | Year, place of publication | Number of copies | |
|-------------------------|---------------------------|-------------------|----------------------------------|------------------|----------------------|
| | | | | In library | At the department |
| 1 | 2 | 3 | 4 | 5 | 6 |
| Basic literature | | | | | |
| 1. | Manipal Manual of Surgery | K Rajgopal Shenoy | CBS Publishers | - | 1 |

| | | | | |
|------------------------------|---|--|-----------------------|---|
| | (4 th edition) | Anitha Shenoy | & Distributors, 2019 | http://spinbook.net/books.php?id=812392416X |
| Additional literature | | | | |
| 2. | Lecture Notes: General Surgery (13 th edition) | Sir Harold Ellis, Sir Roy Calne, Sir Christopher Watson | Wiley-Blackwell, 2016 | - |
| | | | | https://www.academia.edu/23743497/Lecture_Notes_General_Surgery |
| 3. | Essential surgical practice: Higher training in General Surgery (5 th edition) | Alfred Cuschieri, George B Hanna | Hodder Arnold, 2012 | - |
| | | | | https://roseannaowensgreg.files.wordpress.com/2017/05/essential-surgical-practice-higher-surgical-training-in-general-surgery-fifth-edition-by-alfred-cuschieri-george-hanna.pdf |
| 4. | Textbook of surgery (3 th edition) | Joe J. Tjandra, Gordon J.A. Clunie, Anrew H. Kaye, Julian A. Smith | Blackwell, 2006 | - |
| | | | | https://epdf.pub/textbook-of-surgery-3rd-edition.html |

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

«Консультант студента» <http://www.studmedlib.ru>.

10. Methodical instructions for students on mastering the discipline

Education consists of contact work (156 hours), including a lecture course (38 hours) and practical exercises (118 hours), and independent work (60 hours). The main study time is allocated for practical work in surgical diseases.

When studying the discipline, it is necessary to use the entire arsenal of theoretical knowledge and master practical skills in surgical diseases.

Practical exercises are conducted in the form of a theoretical survey and testing, demonstrations of visual aids (slides, tables, multimedia presentations), solving situational problems, answering test tasks, as well as demonstrations of patients, laboratory and instrumental research methods, with clinical analysis, self-supervision of patients surgical profile.

In accordance with the requirements of the Federal State Educational Standard of Higher Education, active and interactive forms of conducting classes are widely used in the educational process (indicate educational technologies). The proportion of classes conducted in interactive forms is at least 20% of classroom lessons.

Independent work of students implies preparation for classes, for testing, writing a medical history, preparation for current and intermediate control and includes the study of all topics of the discipline.

Work on literature is considered as a type of educational work in the discipline "Hospital surgery" and is performed within the hours allotted for its study (in the CDS section).

Each student is provided with access to the library funds of the SOGMA and the department.

For each section of the discipline, guidelines have been developed for students and teachers.

During the study of the academic discipline, students independently examine patients, draw up medical documentation and present the patient for clinical discussion

Writing an essay and educational medical history contribute to the formation of practical skills and abilities.

The student's work in a group forms a sense of teamwork and sociability.

Teaching students helps them develop the skills of communicating with patients, taking into account the ethical and deontological characteristics of pathology and patients. Independent work with patients contributes to the formation of medical behavior, accuracy, discipline.

The initial level of knowledge is determined by oral questioning during classes, during clinical analyzes, when solving typical situational tasks and answering test tasks.

At the end of the discipline, intermediate control is carried out using test control, testing of practical skills and solving situational problems.

Questions on the academic discipline (module) are included in the IGA graduates

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

- Microsoft word
- Microsoft excel
- Microsoft Power Point
- Adobe photoshop
- Adobe Acrobat
- Adobe Finereader

12. Description of the material and technical base necessary for the implementation of the educational process in the discipline

The material and technical base of the department is represented by:

The total area of the educational and laboratory base is 350 - m2, including 200 m2 - educational, 150 m2 - educational and auxiliary.

This fund includes 12 training rooms

Including specialized laboratories (educational 12 and scientific 0)

Equipment of training rooms (laboratories)

classrooms in the amount of 9 (satisfactory condition), 3 (in need of repair)

| №/п | Name of equipment | Amount | Technical condition |
|--------------------------|-----------------------------|--------|---------------------|
| Special equipment | | | |
| 1. | Microscope, pcs. | - | - |
| 2. | Negatoscope, pcs. | - | - |
| 3. | ECG, pcs. | - | - |
| 4. | Other equipment (list) | - | - |
| Phantoms | | | |
| 1. | Phantom reanimation | 1 | satisfactory |
| 2. | Phantom head with esophagus | 1 | satisfactory |
| 3. | Forearm phantom | 1 | satisfactory |
| 4. | Phantom of the pelvis | 1 | satisfactory |
| Dummies | | | |
| 1. | Tables, pcs. | 100 | satisfactory |

13. Conducting educational activities using e-learning and distance learning technologies

In the context of the 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 full-time training, it is possible to study this discipline or part of it using e-learning and distance educational 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, monitoring progress, as well as intermediate certification of students, platforms of the electronic information and educational environment of the academy and / or other e-learning systems recommended for use in the academy, such as Moodle, Zoom, Webinar, etc., can be used.

Lectures can be presented in the form of audio, video files, "live lectures", etc.

Conducting seminars and practical classes is possible on-line both in synchronous and asynchronous modes. Seminars can be held in the form of web-conferences.