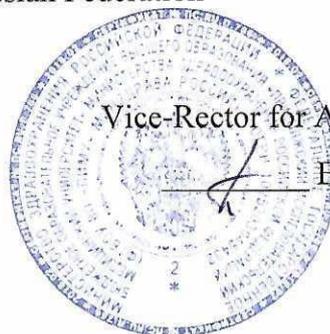


Federal State Budgetary Educational Institution of Higher Education
"Privolzhsky Research Medical University"
Ministry of Health of the Russian Federation



APPROVED

Vice-Rector for Academic Affairs

E.S. Bogomolova

31 August 2021

WORKING PROGRAM

Name of the academic discipline: **ANESTHESIOLOGY, RESUSCITATION, AND INTENSIVE CARE**

Specialty: **31.05.01 GENERAL MEDICINE**
(code, name)

Qualification: **GENERAL PRACTITIONER**

Department: **ANESTHESIOLOGY, RESUSCITATION AND TRANSFUSIOLOGY**

Mode of study: **FULL-TIME**

Labor intensity of the academic discipline: **108 academic hours**

Nizhny Novgorod
2021

The working program has been developed in accordance with the Federal State Educational Standard for the specialty 31.05.01 "GENERAL MEDICINE", approved by the Order of the Ministry of Science and Higher Education of the Russian Federation No. 988 dated August 12, 2020

Developers of the working program:

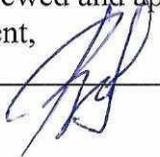
Pichugin V.V. Doctor of Medical Sciences, Professor, Professor of the Department of Anesthesiology, Resuscitation and Transfusiology

Fedorov M.E. Candidate of Medical Sciences, Associate Professor of the Department of Anesthesiology, Resuscitation and Transfusiology

The program was reviewed and approved at the department meeting (protocol No.7, 30.08.21)

Head of the Department,

MD O.V. Voennov



(OV Voennov)

(signature)

30 August 2021

AGREED

Deputy Head of EMA ph.d. of biology



Lovtsova L.V.

(signature)

30 August 2021

1. The purpose and objectives of mastering the academic discipline_____ ANESTHESIOLOGY, RESUSCITATION, AND INTENSIVE CARE (hereinafter – the discipline):

1.1. The purpose of mastering the discipline: *participation in the formation of competencies: UC-1, GPC-1,4,5,6,7, PC-1,2,3,4,5,7,8*

1.2. Tasks of the discipline:

1. basic methods of general and local anesthesia
2. methods of examination of the resuscitation patient
3. the main methods of intensive therapy of patients with the most common syndromes

1.3. Requirements to the deliverables of mastering the discipline

As a result of completing the discipline, the student should

Know:

- the staff and organizational structure and functional responsibilities of the medical staff of the departments of anesthesiology, intensive care and intensive care;
- rules for maintaining and processing medical documentation (inpatient patient card, resuscitation protocol);
- methods of examination of the resuscitation patient;
- clinical manifestations of the main syndromes of impaired vital activity of the body;
- basic methods of general and local anesthesia,
- the main methods of intensive therapy of patients with the most common syndromes;
- principles of infusion-transfusion therapy in critical conditions;
- principles and rules for assessing homeostasis disorders and methods for correcting violations of acid-base balance and water-electrolyte balance;
- principles of monitoring vital body systems of patients in intensive care and intensive care units;
- diagnostic capabilities of laboratory and instrumental methods of examination of patients;
- features of first aid to victims in emergency situations and in centers of mass destruction;
- principles and rules of intensive therapy of various types of cerebral insufficiency;
- rules and methods of extracorporeal hemocorrection;
- modern methods of pain relief;
- principles of operation of modern anesthesia and respiratory equipment;

Be able to:

- conduct an examination of a patient in critical condition;
- to evaluate the data of laboratory methods of examination of the resuscitation patient;
- evaluate the data of instrumental survey methods;
- determine clinical death and other terminal conditions;
- perform cardiopulmonary resuscitation;
- provide first aid in case of emergency and life-threatening conditions;
- diagnose the main syndromes (acute lung injury syndrome, acute cardiovascular insufficiency, endogenous intoxication, pain syndrome, cerebral insufficiency syndromes);
- determine indications for substitution therapy and carry it out in the main life-threatening conditions;
- determine the indications, contraindications and timing of extracorporeal hemocorrection surgery;
- restore the patency of the respiratory tract by non-invasive and invasive methods;
- to carry out infusion - transfusion therapy

Possess:

- skills of examination of a patient in critical condition;

- skills of non-invasive provision of airway patency;
- skills of oxygen therapy with nasopharyngeal catheters and masks;
- skills in diagnosing clinical death;
- skills of conducting indirect heart massage;
- the skills of performing artificial lung ventilation by expiratory methods and the simplest -breathing apparatus, taking into account age characteristics;
- skills of conducting drug therapy during cardiopulmonary resuscitation;
- skills of electrical defibrillation in adults;
- skills of rehabilitation of the tracheobronchial tree with the help of electro – and mechanical suction;
- ABS and water-electrolyte balance assessment skills;
- skills of correction of violations of the acid-base state of the blood in critical conditions;
- first aid skills in emergency and life-threatening conditions;

2. Position of the academic discipline in the structure of the General Educational Program of Higher Education (GEP HE) of the organization.

2.1. The discipline "Anesthesiology, resuscitation, intensive care" refers to the basic part of the cycle of block B1.0.44. The discipline is studied in the 11th and 12th semesters.

2.2. The following knowledge, skills and abilities formed by previous academic disciplines are required for mastering the discipline: human anatomy; histology; normal physiology; pathological physiology; pathological anatomy; pharmacology; biochemistry; microbiology; propaedeutics of internal diseases; radiation diagnostics; allergology; therapy; surgery.

3. Deliverables of mastering the academic discipline and metrics of competence acquisition

Mastering the discipline aims at acquiring the following universal (UC) or/and general professional (GPC) or/and professional (PC) competencies

№	Competence code	The content of the competence (or its part)	Code and name of the competence acquisition metric	As a result of mastering the discipline, the students should:		
				know	be able to	possess
1.	UC-1.	Able to carry out a critical analysis of problem situations based on a systematic approach, develop an action strategy	1.1 Knows: methods of critical analysis and evaluation of modern scientific achievements; basic principles of critical analysis 1.2 Able to: gain new knowledge based on analysis, synthesis, etc.; collect data on	Laws of development of society and personality, psychology and theology, rules of discussion and controversies	To express your opinion in a reasoned and logical manner, to demonstrate patients at debriefings, consultatio	Competent literary speech, medical terminology

			<p>complex scientific problems related to the professional field; search for information and solutions based on action, experiment and experience</p> <p>1.3 Has practical experience: researching the problem of professional activity using analysis, synthesis and other methods of intellectual activity; developing an action strategy to solve professional problems</p>	<p>y, rules of editing professional texts</p>	<p>ns and societies</p>	
2.	GPC-1.	<p>Able to implement moral and legal norms, ethical and deontological principles in professional activities</p>	<p>1.1 Knows: basics of medical ethics and deontology; fundamentals of legislation in the field of healthcare; legal aspects of medical practice</p> <p>1.2 Able to: apply ethical norms and principles of behavior of a healthcare worker in the performance of their professional duties; knowledge of modern legislation in the field of healthcare in solving problems of professional activity; apply the rules and norms of interaction between a doctor and colleagues and patients (their legal representatives)</p> <p>1.3 Has practical</p>	<p>- rules for registration and maintenance of medical documentation (outpatient card, inpatient card, anesthesia sheet, resuscitation protocol);</p> <p>- the method of examination of the resuscitation patient (analysis of complaints, clarification of the history of the disease</p>	<p>- to examine the patient with various life disorders syndromes (analysis of complaints, finding out the history of the disease and life history, conducting a physical examination of the patient, local examination of the pathological focus);</p>	<p>- proper maintenance of medical records;</p> <p>- methods of general clinical examination;</p> <p>- skills in interpreting the results of laboratory, instrumental diagnostic methods;</p> <p>- the algorithm of a detailed clinical diagnosis</p>

			experience in: solving standard problems of professional activity based on ethical norms and deontological principles when interacting with colleagues and patients (their legal representatives), knowledge of the legal aspects of medical practice	and life history, physical examination of the patient, local examination of the pathological focus, if any);		
3.	GPC-4.	Able to apply medical products, provided by the order of healthcare delivery, as well as examine patients for the purpose of determining the diagnosis	4.1 Knows the methodology of collecting anamnesis of life and diseases, complaints of patients (their legal representatives); examination procedure; and physical examination; clinical aspect, methods of diagnosis of the most common diseases; methods of laboratory and instrumental investigations to assess the state of health, medical indications for conducting research, rules for interpreting their results; international statistical classification of diseases and health-related problems (ICD); conditions requiring emergency medical care; procedure for the use of medical	modern classifications of analgesics, anesthetics, antibacterial drugs, sympathomimetics and other groups of drugs; - pharmacokinetics and pharmacodynamics of essential medicines; - features of drug therapy of major life disorders syndromes; - rules and procedure for performing medical manipulations (subcutaneous	-determine indications for substitution therapy; - to draw up programs of drug replacement therapy for ACF, ARF, AHRF, septic conditions; - develop infusion-transfusion therapy programs; - to make programs of antibacterial therapy; -to choose and apply means for general anesthesia; -choose and prescribe medications for	- basic medical diagnostic and therapeutic techniques for providing first aid in urgent and life-threatening conditions; - cardiopulmonary resuscitation skills; -skills of infusion-transfusion therapy; -skills of modern general and local anesthesia; -skills of conducting nutritional support; - skills in preparing and filling the system for intravenous

			<p>devices in accordance with the current procedures for providing medical care, clinical recommendations (treatment protocols) on the medical care delivery taking into account the standards of medical care</p> <p>4.2 Able to: collect complaints, anamnesis of life and disease of patients (their legal representatives), identify risk factors and causes of diseases; apply methods of examination and physical survey of patients; interpret the results of examination and physical examination of patients; diagnose the most common pathology among patients; identify risk factors for cancer; formulate a preliminary diagnosis, to make a plan for conducting laboratory, instrumental and additional investigations of patients in accordance with the procedures for providing medical care, clinical recommendations taking into account the standards of</p>	<p>injections, intramuscular injections, intravenous injections, preparation of the system for intravenous infusions);</p>	<p>regional anesthesia; -prescribe drugs and preparations for nutritive maintenance</p>	<p>infusions;</p>
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			<p>medical care; to refer patients to laboratory, instrumental and additional investigations in accordance with the current procedures for providing medical care, clinical recommendations, taking into account the standards of medical care; refer patients for consultations to medical specialists in accordance with the procedures of medical care, clinical recommendations taking into account the standards of medical care; to interpret and analyze the results of consultations by medical specialists of patients; to interpret and analyze the results of basic (clinical) and additional (laboratory, instrumental) examination methods; carry out differential diagnosis of diseases of patients; identify clinical signs of sudden acute diseases, conditions, exacerbations of chronic diseases without obvious signs of life-threatening, requiring medical</p>			
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			<p>care in an urgent form; use medical devices in accordance with current medical procedures, clinical recommendations (treatment protocols) on the provision of medical care, assistance taking into account the standards of medical care</p> <p>4.3 Has practical experience in: collecting complaints, anamnesis of life and disease of patients (their legal representatives), identifying risk factors and causes of disease development; examination and physical survey of patients; diagnosis of the most common diseases; identification of risk factors for major oncological diseases; formulation of a preliminary diagnosis, drawing up a plan for instrumental, laboratory, additional investigations, consultations of specialist doctors; referral of patients for instrumental, laboratory, additional investigations, consultations of</p>			
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			<p>specialist doctors in accordance with the current procedures for providing medical care, clinical recommendations taking into account the standards of medical care; interpretation of data from additional (laboratory and instrumental) examinations of patients; making a preliminary diagnosis in accordance with the international statistical classification of diseases and problems related to health (ICD); differential diagnosis of diseases; recognition of conditions arising from sudden acute diseases, exacerbation of chronic diseases without obvious signs of a threat to the patient's life and requiring urgent medical care; the use of medical devices in accordance with current medical procedures, clinical recommendations (treatment protocols) on the issues of medical care delivery, assistance taking into account the standards of</p>			
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			medical care			
4.	GPC-5.	Able to assess morphofunctional, physiological conditions and pathological processes in the human body to solve professional problems	<p>5.1 Knows: anatomy, histology, embryology, topographic anatomy, physiology, pathological anatomy and physiology of human organs and systems</p> <p>5.2 Able to: evaluate the basic morphological and functional data, physiological conditions and pathological processes in the human body</p> <p>5.3 Has practical experience in: assessment of basic morphological and functional data, physiological conditions and pathological processes in the human body when solving professional problems</p>	<p>- regularities of the course of pathological processes in organs, systems and the body as a whole;</p> <p>-clinical manifestations of the main syndromes of impaired vital activity of the body;</p> <p>-systems for assessing the severity of the patient's condition;</p> <p>-systems for assessing operational and anesthetic risk;</p>	<p>-analyze the patterns of functioning of various organs and systems in various diseases and pathological processes;</p> <p>-use the algorithm of diagnosis (main, concomitant, complications) taking into account the ICD;</p> <p>- perform basic diagnostic measures to identify urgent and life-threatening conditions</p>	<p>-skills of physical examination of the patient;</p> <p>-skills of clinical and laboratory diagnostics of critical conditions;</p> <p>-skills of monitoring the main functions of the body in the provision of emergency care, the treatment of threatening syndromes, during surgery and the perioperative period;</p> <p>-modern methods of assessing the severity of the patient's condition</p>
5.	GPC-6.	Able to: organize patient care, provide primary health care, ensure the organization of work and professional decision-making in case of medical emergency on the prehospital stage, in the conditions of emergency	6.1 Knows: methods of collecting complaints and anamnesis of patients (their legal representatives); methods of physical examination of patients (examination, palpation, percussion,	- methods of examination of the resuscitation patient (analysis of complaints , clarification of the history of	- to conduct examination of the patient (analysis of complaints , clarification of the history of the disease	- methods of general clinical examination;
						- skills in interpreting the results of laboratory and instrumental diagnostic methods;
						- the

		<p>situations, epidemics and in centers of mass destruction 6.2 Able to: recognize conditions that require healthcare delivery in an emergency form, including in the conditions of emergencies, epidemics and in the centers of mass destruction, requiring medical assistance in an emergency form; organize the work of medical personnel in emergency situations, epidemics and in centers of mass destruction; provide emergency medical care to patients in conditions that pose a threat to the life of patients, including (blood circulation and (or) respiration); use medicines and medical products when providing medical care in emergency conditions; perform basic cardiopulmonary resuscitation; use personal protective equipment; organize patient care, provide primary health care 6.3 Has practical experience in: assessing the condition requiring healthcare delivery in an emergency</p>	<p>auscultation); principles and methods of medical care delivery to patients in urgent conditions, in emergency situations, epidemics and in centers of mass destruction in accordance with the procedures for providing medical care, clinical recommendations taking into account the standards of medical care; clinical signs of major emergency conditions; principles of medical evacuation in emergency situations, epidemics and in centers of mass destruction; principles of work in centers of mass destruction; principles of organization of patient care, first aid treatment</p>	<p>the disease and life history, physical examination of the patient, local examination of the pathological focus); -clinical manifestations of the main syndromes :acute blood loss, hemorrhagic shock, respiratory and circulatory disorders, coma, acute hepatic-renal insufficiency, endogenous intoxication syndrome) ; -laboratory and instrumental diagnostics of emergency conditions; - possibilities of modern methods of substitution therapy</p>	<p>and life history, physical examination of the patient, local examination of the pathological focus); -assign and interpret the results of modern laboratory and instrumental methods of examination; -determine the severity of the patient's condition; - formulate a diagnosis and determine a plan of urgent medical measures; -determine the indications for substitution therapy; - to identify life-threatening disorders of vital activity; - diagnose terminal conditions;</p>	<p>algorithm of a detailed clinical diagnosis; - basic medical diagnostic and therapeutic techniques for providing first aid in urgent and life-threatening conditions; -skills in determining clinical death; - methods of cardiopulmonary resuscitation; -skills in ensuring the patency of the respiratory tract, oxygen therapy, infusion therapy and nutritional support; -skills of modern anesthesia; - proper maintenance of medical records</p>
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		<p>form, including in emergency situations, epidemics and in the centers of mass destruction; definition of life-threatening conditions, including the state of clinical death (arrest of vital important functions of the human body (blood circulation and (or) breathing) requiring medical care in the emergency form; medical care delivery in emergency form to patients in conditions, constituting life-threatening situations including clinical death (arrest of vital functions of human body (blood circulation and (or) respiration); the use of medicines and medical products in the provision of medical care in case of emergency conditions and epidemics; use of personal protective equipment; organization of patient care, first aid measures</p>		<p>for the most common emergency conditions; protocol of resuscitation measures; rules of registration of medical documentation</p>	<p>-provide emergency assistance in case of a threat to life; -to carry out anesthesia; -perform cardiopulmonary resuscitation</p>	
6.	GPC-7.	<p>Able to prescribe treatment and monitor its effectiveness and safety</p>	<p>7.1 Knows: methods of drug and non-drug treatment, medical indications for the use of medical devices for the most common diseases; groups of drugs</p>	<p>- rules and procedure for performing medical manipulations (subcutaneous</p>	<p>-ensure the patency of the respiratory tract; -prepare anesthesia machines for</p>	<p>- skills in monitoring vital functions; - skills of introduction of epiglottic ducts; -tracheal</p>

			<p>used to provide medical care in the treatment of the most common diseases; the mechanism of their action, medical indications and contraindications to the prescription; compatibility, possible complications, side effects, adverse reactions, including serious and unforeseen; features of medical care in emergency forms</p> <p>7.2 Able to: develop a treatment plan for patients with the most common diseases in accordance with the procedures for providing medical care, clinical guidelines taking into account the standards of medical care; prevent or eliminate complications, side effects, adverse reactions, including unforeseen ones, resulting from diagnostic or therapeutic manipulations, the use of drugs and (or) medical devices, non-drug treatment</p> <p>7.3 Has practical experience in: developing a treatment plan for patients with the most common diseases in</p>	<p>injections, intramuscular injections, intravenous injections, preparation of the system for intravenous infusions); -device and principles of operation of modern anesthesia and respiratory equipment; -rules and procedure for the use of medical equipment during cardiopulmonary resuscitation; - modern information technologies;</p>	<p>operation; -prepare artificial lung ventilation devices of varying degrees of complexity for operation; -prepare for work and connect the monitors for monitoring the patient's vital activity; -use equipment for life support of the patient (aspirators, gastric lavage systems, systems for intravenous infusions, infusers for drug therapy, drainage systems)</p>	<p>intubation skills; -aspiration skills; -- skills in preparing and filling the system for intravenous infusions; -skills of working with infusers; -skills of working with modern anesthesia and respiratory equipment; - skills of applying a hemostatic tourniquet; -naso-gastric tube and urinary catheter placement skills</p>
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			<p>accordance with the current procedures for the provision of medical care, clinical guidelines, taking into account the standards of medical care; provision of emergency and urgent medical care to patients with the most common diseases in accordance with the current procedures for providing medical care, clinical guidelines, taking into account the standards of medical care; selection and prescription of medicines, medical devices with the most common diseases for the treatment of the most common diseases of children and adults in accordance with the current procedures for providing medical care, clinical recommendations, taking into account the standards of medical care; evaluation of the effectiveness and safety of the use of drugs, medical devices and non-drug treatment of patients with the most common diseases; selection and prescription of non-drug treatment</p>			
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			<p>for patients with the most common diseases in accordance with the procedures for providing medical care, clinical guidelines, taking into account the standards of medical care; prevention and treatment of complications, side effects, adverse reactions, including unforeseen ones, resulting from diagnostic or therapeutic manipulations, the use of drugs and (or) medical devices, non-drug treatment; providing medical care to patients with sudden acute diseases, conditions, exacerbation of chronic diseases without obvious signs of a threat to the patient's life in an emergency form; the use of medicines and medical devices in the provision of medical care in an emergency form</p>			
7.	PC -1	Able to assess the condition of a patient requiring medical care in emergency or emergency forms	<p>1.1 Knows: etiology, pathogenesis and pathomorphology, clinical picture, differential diagnosis, features of the course, complications and</p>	- methods of examination of the resuscitation patient (analysis of complaints	- to conduct examination of the patient (analysis of complaints	- methods of general clinical examination; - skills in interpreting the results of laboratory and

			<p>outcomes of diseases of internal organs; methods of collecting complaints and anamnesis; methods of physical examination (examination, palpation, percussion, auscultation); a list of methods of laboratory and instrumental studies to assess the condition, the main medical indications for research and interpretation of results in patients requiring medical care in emergency or emergency forms</p> <p>1.2 Is able to: identify clinical signs of conditions requiring medical care in urgent or emergency forms</p>	<p>, clarification of the history of the disease and life history, physical examination of the patient, local examination of the pathological focus); - clinical manifestations of the main syndromes: acute blood loss, hemorrhagic shock, respiratory and circulatory disorders, coma, acute hepatic-renal insufficiency, endogenous intoxication syndrome); - laboratory and instrumental diagnostics of emergency conditions; - possibilities of</p>	<p>clarification of the history of the disease and life history, physical examination of the patient, local examination of the pathological focus); - assign and interpret the results of modern laboratory and instrumental methods of examination; - determine the severity of the patient's condition; - formulate a diagnosis and determine a plan of urgent medical measures; - to carry out therapeutic measures for the most common diseases and conditions in adults and</p>	<p>instrumental diagnostic methods; - the algorithm of a detailed clinical diagnosis; - basic medical diagnostic and therapeutic techniques for providing first aid in urgent and life-threatening conditions; - skills in determining clinical death; - methods of cardiopulmonary resuscitation; - skills in ensuring the patency of the respiratory tract, oxygen therapy, infusion therapy and nutritional support; - skills of modern anesthesia; - proper maintenance of medical records</p>
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				<p>modern methods of substitution therapy for the most common emergency conditions; protocol of resuscitation measures; rules of registration of medical documentation</p>	<p>children; -timely identify life-threatening violations; -determine the indications for substitution therapy; - diagnose terminal conditions; -provide emergency assistance in case of a threat to life; -to carry out anti-shock measures; -to carry out anesthesia; -perform cardiopulmonary resuscitation</p>	
8.	PC-2	<p>PC-2 Able to recognize conditions arising from sudden acute diseases, exacerbation of chronic diseases without obvious signs of a threat to the patient's life and requiring urgent medical care, recognize conditions that pose a threat to the patient's life including conditions of clinical death (stopping vital functions of the human body (blood circulation and/or respiration),</p>	<p>2.1 Knows: etiology, pathogenesis and pathomorphology, clinical picture, differential diagnosis, features of the course, complications and outcomes of diseases of internal organs; methods of collecting complaints and anamnesis in patients (their legal representatives); methods of physical examination of patients (examination, palpation,</p>	<p>- regularities of the course of pathological processes in organs, systems and the body as a whole; -clinical manifestations of the main syndromes of impaired</p>	<p>analyze the patterns of functioning of various organs and systems in various diseases and pathological processes; -use the algorithm of diagnosis (main, concomitant</p>	<p>-skills of physical examination of the patient; -skills of clinical and laboratory diagnostics of critical conditions; -skills of monitoring the main functions of the body in the provision of emergency care, the</p>

		requiring the provision of emergency medical care	percussion, auscultation); a list of methods of laboratory and instrumental investigations to assess the patient's condition, the main medical indications for conducting research and interpreting the results; clinical signs of sudden cessation of blood circulation and/ or respiration 2.2 Can: identify clinical signs of conditions requiring emergency medical care; identify conditions requiring emergency medical care, including clinical signs of sudden cessation of blood circulation and respiration	vital activity of the body; -systems for assessing the severity of the patient's condition; -systems for assessing operational and anesthetic risk; ICD	nt, complications) taking into account the ICD; - perform basic diagnostic measures to identify urgent and life-threatening conditions	treatment of threatening syndromes, during surgery and the perioperative period; -modern methods of assessing the severity of the patient's condition
9.	PC-3	PC-3 Able to: provide emergency medical care to patients in case of sudden acute diseases, conditions, exacerbation of chronic diseases without obvious signs of a threat to the patient's life, provide emergency medical care to patients in conditions that threaten the patient's life, including clinical death (suspension of vital functions the human body (circulation and/or respiration)	.1 Knows: basic cardiopulmonary resuscitation rules; principles of operation of devices for external electropulse therapy (defibrillation); rules for performing external electrical impulse therapy (defibrillation) in case of sudden cessation of blood circulation and / or respiration 3.2 Able to: perform measures to provide medical care in urgent and emergency forms; basic cardiopulmonary resuscitation in combination with electrical impulse therapy	-modern classifications of analgesics, anesthetics, antibacterial drugs, sympathomimetics and other groups of medicines; - pharmacokinetics and pharmacodynamics of essential medicines; - features of drug therapy of	ensure the patency of the respiratory tract; -prepare anesthesia machines for operation; -prepare artificial lung ventilation devices of varying degrees of complexity for operation; -prepare for work and	- skills in monitoring vital functions; - skills of introduction of epiglottic ducts; -tracheal intubation skills; -aspiration skills; -- skills in preparing and filling the system for intravenous infusions; -skills of working with infusers;

			(defibrillation)	major life disorders syndromes ; - rules and procedure for performing medical manipulations (subcutaneous injections, intramuscular injections, intravenous injections, preparation of the system for intravenous infusions);	connect the monitors for monitoring the patient's vital activity; -use equipment for life support of the patient (aspirators, gastric lavage systems, systems for intravenous infusions, infusers for drug therapy, drainage systems)	-skills of working with modern anesthesia and respiratory equipment; - skills of applying a hemostatic tourniquet; -nasogastric tube and urinary catheter placement skills
10.	PC-4	Able to use medicines and medical devices for providing medical care in emergency forms	4.1 Knows: modern methods of using medicines, medical devices for diseases and conditions in accordance with the current procedures for providing medical care, clinical recommendations (treatment protocols) on the provision of medical care taking into account the standards of medical care in the provision of medical care in emergency or urgent forms; the	modern classifications of analgesics, anesthetics , antibacterial drugs, sympathomimetics and other groups of drugs; - pharmacokinetics and pharmacodynamics of essential medicines; - features of drug therapy of major life	ensure the patency of the respiratory tract; -prepare anesthesia machines for operation; -prepare artificial lung ventilation devices of varying degrees of complexity for operation; -prepare for work and connect	- skills in monitoring vital functions; - skills of introduction of epiglottic ducts; -tracheal intubation skills; -aspiration skills; -- skills in preparing and filling the system for intravenous infusions; -skills of working with infusers; -skills of

			<p>mechanism of action of drugs, medical devices, medical indications and contraindications to their use; complications caused by their use; principles of operation of devices for external electric pulse therapy (defibrillation); rules for performing external electric pulse therapy (defibrillation) in case of sudden cessation of blood circulation and / or respiration</p> <p>4.2 Able to: prescribe medicines, medical devices taking into account the diagnosis, age and clinical picture of the disease in accordance with the current procedures for providing medical care, clinical recommendations (treatment protocols) on the medical care delivery in emergency or urgent forms</p>	<p>disorders syndromes ;</p> <p>- rules and procedure for performing medical manipulations (subcutaneous injections, intramuscular injections, intravenous injections, preparation of the system for intravenous infusions);</p>	<p>the monitors for monitoring the patient's vital activity;</p> <p>-use equipment for life support of the patient (aspirators, gastric lavage systems, systems for intravenous infusions, infusers for drug therapy, drainage systems)</p>	<p>working with modern anesthesia and respiratory equipment;</p> <p>- skills of applying a hemostatic tourniquet;</p> <p>-naso-gastric tube and urinary catheter placement skills</p>
11.	PC-5	<p>Able to collect complaints, anamnesis of the patient's life and illness, conduct a complete physical examination of the patient (examination, palpation, percussion, auscultation),</p>	<p>5.1 Knows: the legislation of the Russian Federation in the field of health care, regulations and other documents that determine the activities of medical organizations and healthcare</p>	<p>- methods of examination of the resuscitation patient (analysis of complaints , clarification</p>	<p>- to conduct examination of the patient (analysis of complaints , clarification of the</p>	<p>- methods of general clinical examination;</p> <p>- skills in interpreting the results of laboratory and instrumental diagnostic</p>

	<p>formulate a preliminary diagnosis and draw up a plan for laboratory and instrumental examinations of the patient</p>	<p>workers; method of collecting complaints, anamnesis of life and disease of the patient; a technique for a complete physical examination of the patient (examination, palpation, percussion, auscultation); etiology, pathogenesis and pathomorphology, clinical aspect, differential diagnosis, clinical features, complications and outcomes of diseases of internal organs; patterns of functioning of a healthy human body and mechanisms for ensuring health from the standpoint of the theory of functional systems; features of the regulation of the functional systems of the human body in pathological processes; methods of laboratory and instrumental examinations for assessing the state of health, medical indications for conducting investigations, rules for interpreting their results</p> <p>5.2 Able to: collect complaints, anamnesis of life and disease of the patient and analyze the</p>	<p>n of the history of the disease and life history, physical examination of the patient, local examination of the pathological focus); -clinical manifestations of the main syndromes :acute blood loss, hemorrhagic shock, respiratory and circulatory disorders, coma, acute hepatic-renal insufficiency, endogenous intoxication syndrome) ; -laboratory and instrumental diagnostics of emergency conditions; - possibilities of modern methods of</p>	<p>history of the disease and life history, physical examination of the patient, local examination of the pathological focus); -assign and interpret the results of modern laboratory and instrumental methods of examination; -determine the severity of the patient's condition; - formulate a diagnosis and determine a plan of urgent medical measures; -determine the indications for substitution therapy; - to identify life-threatening disorders of vital activity; - diagnose</p>	<p>methods; - the algorithm of a detailed clinical diagnosis; - basic medical diagnostic and therapeutic techniques for providing first aid in urgent and life-threatening conditions; -skills in determining clinical death; - methods of cardiopulmonary resuscitation; -skills in ensuring the patency of the respiratory tract, oxygen therapy, infusion therapy and nutritional support; -skills of modern anesthesia; - proper maintenance of medical records</p>
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			information received; conduct a complete physical examination of the patient (examination, palpation, percussion, auscultation) and interpret its results; determine the sequence of volume, content and sequence of diagnostic measures incl. modern digital technologies	substitution therapy for the most common emergency conditions; protocol of resuscitation measures; rules of registration of medical documentation	terminal conditions; -provide emergency assistance in case of a threat to life; -to carry out anesthesia; -perform cardiopulmonary resuscitation	
12.	PC-7	Able to: make a differential diagnosis with other diseases/conditions including emergencies, establish a diagnosis taking into account the current international statistical classification of diseases and related health problems (ICD	7.1 Knows: etiology, pathogenesis and pathomorphology, clinical aspect, differential diagnosis, clinical features, complications and outcomes of diseases of internal organs; methods of laboratory and instrumental examinations for assessing the state of health, medical indications for conducting examinations, rules for interpreting their results; ICD 7.2 Able to: analyze the results of the patient's examination, if necessary, justify and plan the scope of additional examinations; interpret the results of collecting information about the patient's disease; interpret the data obtained during the laboratory examination of the patient; interpret the data obtained	- clinical manifestations of the main syndromes of impaired vital activity of the body (AHF, ARF, ARHF, endogenous intoxication, cerebral insufficiency); -laboratory and instrumental diagnostics of life-threatening conditions; -methods of immediate elimination of life-threatening conditions; - features	- to conduct examination of the patient (analysis of complaints, clarification of the history of the disease and life history, physical examination of the patient, local examination of the pathological focus); -assign and interpret the results of modern laboratory and instrumental methods of examination;	- methods of general clinical examination; - skills in interpreting the results of laboratory and instrumental diagnostic methods; - the algorithm of a detailed clinical diagnosis; - basic medical diagnostic and therapeutic techniques for providing first aid in urgent and life-threatening conditions; --skills in ensuring the patency of the respiratory tract, oxygen

			<p>during the instrumental examination of the patient; interpret the data obtained during consultations of the patient by medical specialists; to carry out differential diagnostics of diseases of internal organs from other diseases</p>	<p>of emergency care in pediatrics</p> <ul style="list-style-type: none"> - possibilities of modern methods of substitution therapy for the most common emergency conditions; - rules and procedure for infusion-transfusion therapy; -rules for maintaining medical records; -protocol of resuscitation measures; 	<ul style="list-style-type: none"> -determine the severity of the patient's condition; - formulate a diagnosis and determine a plan of urgent medical measures; -timely identify life-threatening violations; -to carry out therapeutic measures for the most common diseases and urgent conditions in children -determine the indications for substitution therapy; -provide emergency assistance in case of a threat to life; -to carry out anti-shock measures; -to carry out anesthesia; -diagnose terminal conditions; 	<p>therapy, infusion therapy and nutritional support;</p> <ul style="list-style-type: none"> - skills in preparing and filling the system for intravenous infusions -skills of modern anesthesia; -skills in determining the blood group, conducting compatibility tests during blood transfusion and blood components; -skills in determining clinical death; - methods of cardiopulmonary resuscitation; - proper maintenance of medical records
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					-perform cardiopulmonary resuscitation according to the modern standard	
13.	PC-8	Able to: develop a treatment plan for a disease or condition and prescribe medicine, medical devices, therapeutic nutrition and non-drug treatment taking into account the diagnosis, age and clinical picture in accordance with current procedures for the medical care delivery, clinical recommendations (treatment protocols) on the provision of medical care taking into account the standards of medical care and to evaluate the effectiveness and safety of the use of medicines, medical devices, therapeutic nutrition and other methods of treatment	8.1 Knows: modern methods of using medicines, medical devices and therapeutic nutrition in diseases and conditions of the patient in accordance with the current procedures for medical care, clinical recommendations (treatment protocols) on the provision of medical care taking into account the standards of medical care; the mechanism of action of medicines, medical devices and therapeutic nutrition, medical indications and contraindications to their use; complications caused by their use; modern methods of non-drug treatment of diseases and conditions of the patient in accordance with current medical care procedures, clinical recommendations (treatment protocols) on the provision of medical care taking into account the standards of medical care; action	- rules and procedure for performing medical manipulations (subcutaneous injections, intramuscular injections, intravenous injections, preparation of the system for intravenous infusions); -device and principles of operation of modern anesthesia and respiratory equipment; -rules and procedure for the use of medical equipment during cardiopulmonary resuscitation; - modern	-ensure the patency of the respiratory tract; -prepare anesthesia machines for operation; -prepare artificial lung ventilation devices of varying degrees of complexity for operation; -prepare for work and connect the monitors for monitoring the patient's vital activity; -use equipment for life support of the patient (aspirators, gastric lavage systems, systems for	- skills in monitoring vital functions; - skills of introduction of epiglottic ducts; -tracheal intubation skills; -aspiration skills; -- skills in preparing and filling the system for intravenous infusions; -skills of working with infusers; -skills of working with modern anesthesia and respiratory equipment; - skills of applying a hemostatic tourniquet; -nasogastric tube and urinary catheter placement skills

			<p>mechanism of non-drug treatment; medical indications and contraindications to its prescription; side effects, complications caused by its use</p> <p>8.2 Able to: draw up a treatment plan for 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 providing medical care, clinical recommendations (treatment protocols) on the provision of medical care, taking into account the standards of medical care; prescribe medications, medical devices and therapeutic nutrition taking into account the diagnosis, age and clinical picture of the disease in accordance with the current medical care procedures, clinical recommendations (treatment protocols) on the provision of medical care taking into account the standards of medical care; prescribe non-drug treatment taking into account the diagnosis, age and clinical picture of the disease in accordance with the current medical care procedures, clinical recommendations (treatment protocols)</p>	<p>information technologies;</p>	<p>intravenous infusions, infusers for drug therapy, drainage systems)</p>	
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			on issues related to the provision of medical care taking into account the standards of medical care; evaluate the effectiveness and safety of the use of medicines, medical devices and therapeutic nutrition			
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4. Sections of the academic discipline and competencies that are formed when mastering them

№	Competence code	Section name of the discipline	The content of the section in teaching units
1	UC1 GPC1,4,5,6,7 PC 1,2,3.4,5,7,8	General anesthesiology	. The subject of study and methods of anesthesiology. Types of anesthesia. Concepts of combined, combined anesthesia, multicomponent anesthesia. Components of general anesthesia. Stages of the anesthesiological manual. Preoperative examination and preparation of the patient for surgery. Premedication. Induction into anesthesia. Maintaining anesthesia. Exit from anesthesia. Monitoring. Maintaining documentation. (0,3)
2	UC1 GPC1,4,5,6,7 PC 1,2,3.4,5,7,8	Pathophysiology of pain. Intensive therapy of pain syndrome.	Mechanisms of nociception and antinociception. Transduction. Transmission. Modulation. Perception. Methods and means of pain control. Acute pain syndrome. Chronic pain syndromes. Mechanisms of formation of the main acute pain syndromes. Acute pain management. Narcotic analgesics. Non-narcotic analgesics. Analgesics are antipyretics. Local anesthetics and regional anesthesia. Postoperative pain syndrome. Mechanisms of formation and management of postoperative pain syndrome. (0,3)
3	UC1 GPC1,4,5,6,7 PC 1,2,3.4,5,7,8	Comprehensive measures to remove from the state of clinical death. Resuscitation	Pathophysiology of terminal conditions. Predagonia. Terminal pause. Agony. Clinical death. Primary apnea. Sudden cardiac arrest. Mechanisms of stopping blood circulation. The concept of cardiopulmonary resuscitation. Protocols of cardiopulmonary resuscitation. Basic resuscitation measures. Assessment of life signs and recognition of sudden cardiac arrest and clinical death. Indirect heart massage. Opening of the respiratory tract. Artificial breaths. The use of an external automatic defibrillator. Extended resuscitation measures. Pharmacological therapy of sudden cardiac arrest. The use of a manual defibrillator. The use of a mask ventilator. (0,3)
4	UC1 GPC1,4,5,6,7 PC 1,2,3.4,5,7,8	Acute circulatory disorders	Clinically significant (urgent) circulatory disorders. Syncope, collapse, shock: mechanisms of development and treatment. Classification of shocks. Cardiogenic shock. Hypovolemic shocks. Hemorrhagic shock. Septic shock. Anaphylactic shock. Causes, mechanisms of development, diagnosis, intensive treatment of various types of shock(0,3).
5	UC1 GPC1,4,5,6,7 PC 1,2,3.4,5,	Fundamentals of neuro-resuscitation.	The concept of cerebral homeostasis. Pathophysiology of primary and secondary cerebral lesions. TBI, pathogenesis of injury, emergency measures, intensive treatment. Brain tumors, pathogenesis of damage and treatment. Features of anesthetic provision in patients with TBI and brain tumors. Stroke, causes, pathogenesis, emergency care, intensive treatment. (0,3)

	7,8		
6	UC1 GPC1,4, 5,6,7 PC 1,2,3.4,5, 7,8	Acute respiratory dysfunction	Acute respiratory failure, causes, mechanisms of development, diagnosis of the condition, emergency care, intensive treatment. Respiratory disorders with airway obstruction, hypoventilation, emergency care, intensive treatment. Respiratory disorders with restriction of the respiratory system, emergency care, intensive treatment. ARF in out-of-hospital viral and bacterial pneumonia. Aspiration pneumonia: etiology, pathogenesis, emergency care, intensive treatment. ARDS: causes, pathogenesis, diagnosis, intensive treatment. The main methods of treatment of respiratory disorders: ensuring the patency of the respiratory tract, oxygen therapy, CPAP therapy, NIVL, ventilator, methods that improve the drainage function of the tracheobronchial tree, therapeutic fibrobronchoscopy. (0,3)
7	UC1 GPC1,4, 5,6,7 PC 1,2,3.4,5, 7,8	Fundamentals of blood coagulation disorders	Hemostasis disorders in patients in critical conditions. DIC syndrome: causes, pathogenesis, diagnosis, treatment. Hypocoagulation. Hypercoagulation. The main methods of hemostasis control. Transfusion of freshly frozen plasma. Anticoagulant therapy. Plasmapheresis. Indications, contraindications, methods. (0,3)
8	UC1 GPC1,4, 5,6,7 PC 1,2,3.4,5, 7,8	Immunopathology in anesthesiology and intensive care	Systemic inflammation syndrome in patients in critical conditions. Cytokine storm. Sepsis: definition, etiology, pathogenesis, diagnosis, intensive treatment. Antibacterial and antimicrobial therapy for sepsis. Methods of extracorporeal detoxification in the treatment of sepsis. Multiple organ failure syndrome in sepsis. Septic shock: etiology, pathogenesis, diagnosis, emergency measures, intensive treatment. Immunodeficiency conditions in patients in critical conditions. Features of the curation of patients with HIV infection. (0,3)
9	UC1 GPC1,4, 5,6,7 PC 1,2,3.4,5, 7,8	The basics of homeostasis disorders	. The concept of water-electrolyte and acid-base homeostasis. ABS disorders in patients in critical conditions: classification, causes, pathogenesis, diagnosis, principles of treatment. Dyshydrria: classification, causes, pathogenesis, diagnosis, principles of treatment. Violations of the electrolyte composition: classification, causes, pathogenesis, diagnosis, principles of treatment. (0,3)
10	UC1 GPC1,4, 5,6,7 PIIC 1,2,3.4,5, 7,8	Acute disorders of the detoxification systems of the body	The concepts of exogenous and endogenous intoxication. Causes of development, pathogenesis, diagnosis. The main methods of intensive treatment for exogenous intoxication. The role of endogenous intoxication in the development of critical conditions. Methods of treatment of endogenous intoxication. The role of extracorporeal detoxification methods. Hemofiltration, hemodiafiltration, hemodialysis, plasmapheresis, hemosorption, plasmasorption: indications, contraindications, characteristics of methods. (0,3)

5. Volume of the academic discipline and types of academic work

Type of educational work	Labor intensity		Labor intensity (AH) in semesters	
	volume in credit units (CU)	volume in academic hours (AH)	№11	№12
Classroom work, including	2	72	36	36
Lectures (L)		20	10	10
Laboratory practicum (LP)*				
Practicals (P)		52	26	26
Seminars (S)				
Student's individual work (SIW)	1	36	18	18

Mid-term assessment				
credit/exam (<i>specify the type</i>)			credit	credit
TOTAL LABOR INTENSITY	3	108	54	54

6. Content of the academic discipline

6.1. Sections of the discipline and types of academic work

№	Name of the section of the academic discipline	Types of academic work* (in AH)					
		L	LP	P	S	SIW	total
1	General anesthesiology	2		5,2		3,6	10,8
2	Pathophysiology of pain. Intensive therapy of pain syndrome	2		5,2		3,6	10,8
3	Comprehensive measures to remove from the state of clinical death. Resuscitation	2		5,2		3,6	10,8
4	Acute circulatory disorders	2		5,2		3,6	10,8
5	Fundamentals of neuro-resuscitation	2		5,2		3,6	10,8
6	Acute respiratory dysfunction	2		5,2		3,6	10,8
7	Fundamentals of blood coagulation disorders	2		5,2		3,6	10,8
8	Immunopathology in anesthesiology and intensive care	2		5,2		3,6	10,8
9	The basics of homeostasis disorders	2		5,2		3,6	10,8
10	Acute disorders of the detoxification systems of the body	2		5,2		3,6	10,8
	TOTAL/108	20		52		36	108

* - L – lectures; LP – laboratory practicum; P – practicals; S – seminars; SIW – student's individual work.

6.2. Thematic schedule of educational work types:

6.2.1 Thematic schedule of lectures

№	Name of lecture topics	Volume in AH	
		semester 11	semester 12
1	Fundamentals of modern anesthesiology. General and regional anesthesia.	2	
2	General issues of intensive care. Modern standard of cardiopulmonary resuscitation	2	
3	Modern aspects of therapeutic anesthesia.	2	
4	Infusion-transfusion therapy. Modern plasma substitutes. Basics of nutritional support. Parenteral and enteral nutrition.	2	
5	Intensive therapy of acute respiratory failure syndrome.	2	
6	Acute cardiovascular insufficiency. Intensive care.		2
7	Intensive therapy of coms of various etiologies.		2
8	Shock: etiology, pathogenesis, clinic. Principles of intensive care.		2

9	Sepsis. Principles of antibacterial therapy. Immunocorrection.		2
10	Endo – and exotoxicoses. Extracorporeal hemocorrection.		2
	TOTAL (total - AH) 20	10	10

6.2.2. The thematic plan of laboratory practicums (*if this type of classes is stipulated in the curriculum*)

№	Name of laboratory practicums	Volume in AH	
		semester	semester
	TOTAL (total - AH)		

6.2.3. Thematic plan of practicals

№	Name of the topics of practicals	Volume in AH	
		semester 11	semester 12
1	Fundamentals of modern anesthesiology. General and regional anesthesia.	5,2	
2	Pathophysiology of pain. Intensive therapy of pain syndrome	5,2	
3	Modern aspects of therapeutic anesthesia.	5,2	
4	Infusion-transfusion therapy. Modern plasma substitutes. Basics of nutritional support. Parenteral and enteral nutrition.	5,2	
5	Intensive therapy of acute respiratory failure syndrome.	5,2	
6	Acute cardiovascular insufficiency. Intensive care		5,2
7	Intensive therapy of coms of various etiologies		5,2
8	Shock: etiology, pathogenesis, clinic. Principles of intensive care.		5,2
9	Sepsis. Principles of antibacterial therapy. Immunocorrection.		5,2
10	Endo – and exotoxicoses. Extracorporeal hemocorrection.		5,2
	TOTAL (total - AH)	26	26

6.2.4. Thematic plan of seminars (*if this type of classes is stipulated in the curriculum*)

№	Name of seminar topics	Volume in AH	
		semester	semester
	TOTAL (total - AH)		

6.2.5. Types and topics of student's individual work (SIW)

№	Types and topics of SIW	Volume in AH	
		semester 11	semester 12
1	Fundamentals of modern anesthesiology. General and regional anesthesia.	3,6	
2	Pathophysiology of pain. Intensive therapy of pain syndrome	3,6	
3	Modern aspects of therapeutic anesthesia	3,6	
4	Infusion-transfusion therapy. Modern plasma substitutes. Basics of nutritional support. Parenteral and enteral nutrition.	3,6	
5	Intensive therapy of acute respiratory failure syndrome.	3,6	
6	Acute cardiovascular insufficiency. Intensive care		3,6
7	Intensive therapy of coms of various etiologies		3,6
8	Shock: etiology, pathogenesis, clinic. Principles of intensive care.		3,6
9	Sepsis. Principles of antibacterial therapy. Immunocorrection.		3,6
10	Endo – and exotoxicoes. Extracorporeal hemocorrection.		3,6
	TOTAL (total - AH)	18	18

7. Types of assessment formats for ongoing monitoring and mid-term assessment

№	Semester No.	Types of control	Name of section of academic discipline	Competence codes	Assessment formats		
					types	number of test questions	number of test task options
1.		Current monitoring	Control of mastering the topic of modern anesthesiology. General and regional anesthesia	UC1 GP1,4,5,6,7 PC 1,2,3,4,5,7,8	1 - Ongoing testing. Oral individual survey. 2 - Ongoing testing. Control work. 3 - Ongoing testing. Oral individual survey	5	2
			Control of mastering the topic of pain. Intensive therapy of pain syndrome	UC1 GPC1,4,5,6,7 PC 1,2,3,4,5,7,8	1 - Ongoing testing. Oral individual	5	2

					al survey. 2 - Ongoing testing. Control work. 3 - Ongoing testing. Oral individual survey			
			Control of the topic	Modern aspects of therapeutic anesthesia	UC1 GPC1,4,5,6,7 PC 1,2,3,4,5,7,8	1 - Ongoing testing. Oral individual survey. 2 - Ongoing testing. Control work. 3 - Ongoing testing. Oral individual survey	5	2
			Control of the topic	Infusion-transfusion therapy. Modern plasma substitutes. Basics of nutritional support. Parenteral and enteral nutrition.	UC1 GPC1,4,5,6,7 PC 1,2,3,4,5,7,8	1 - Ongoing testing. Oral individual survey. 2 - Ongoing testing. Control work. 3 - Ongoing testing. Oral individual survey	5	2
			Control of the topic	Intensive therapy of acute respiratory failure syndrome.	UC1 GPC1,4,5,6,7 PC 1,2,3,4,5,7,8	1 - Ongoing testing. Oral individual survey. 2 -	5	2

						Ongoing testing. Control work. 3 - Ongoing testing. Oral individual survey		
			Control of the topic	Acute cardiovascular insufficiency. Intensive care	UC1 GPC1,4,5,6,7 PC 1,2,3,4,5,7,8	1 - Ongoing testing. Oral individual survey. 2 - Ongoing testing. Control work. 3 - Ongoing testing. Oral individual survey	5	2
			Control of the topic	Intensive therapy of coms of various etiologies	UC1 GPC1,4,5,6,7 PC 1,2,3,4,5,7,8	1 - Ongoing testing. Oral individual survey. 2 - Ongoing testing. Control work. 3 - Ongoing testing. Oral individual survey	5	2
			Control of the topic	Shock: etiology, pathogenesis, clinic. Principles of intensive care	UC1 GPC1,4,5,6,7 PC 1,2,3,4,5,7,8	1 - Ongoing testing. Oral individual survey. 2 - Ongoing testing. Control	5	2

						work. 3 - Ongoing testing. Oral individu al survey		
			Control of mastering the topic	Sepsis. Principles of antibacterial therapy. Immunocorre ction	UC1 GPC1,4,5,6,7 PC 1,2,3,4,5,7,8	1 - Ongoing testing. Oral individu al survey. 2 - Ongoing testing. Control work. 3 - Ongoing testing. Oral individu al survey	5	2
			Control of mastering the topic	Endo – and exotoxico ses. Extracorporeal hemocorre ction.	UC1 GPC1,4,5,6,7 PC 1,2,3,4,5,7,8	1 - Ongoing testing. Oral individu al survey. 2 - Ongoing testing. Control work. 3 - Ongoing testing. Oral individu al survey	5	2
2.		Mid- term assess ment	Exam/ Credit					

8. Educational, methodological and informational support for mastering the academic discipline (printed, electronic publications, the Internet and other network resources)

8.1. Key literature references

№	Name according to bibliographic requirements	Number of copies	
		at the department	in the library
1	Экстренные и неотложные состояния. С.А.Сумин,		1

	К.Г.Шаповалов. Учебное пособие для кадров высшей квалификации. М, МИА, 2019	
2	V. Pichugin. Anesthesiology and Intensive Care Medicine. Handbook for foreign students. Nizhny Novgorod: Publishing House of Privolzhsky Research Medical University.- 2018.- 271 p.	1
3	«Анестезиология и реаниматология» Под ред. Сумин С.А., М., Медицинское информационное агенство, 2019	1

8.2. Further reading

№	Name according to bibliographic requirements	Number of copies	
		at the department	in the library
1	Национальное руководство по реанимации, 2015	1	
2	Национальное руководство по анестезиологии. Под ред. ИБ Заболотских. М., Медицинское информационное агенство 2019	1	
3	Национальное руководство по интенсивной терапии. Под ред. ИБ Заболотских. М., Медицинское информационное агенство 2019	1	

8.3. Electronic educational resources for teaching academic subjects

8.3.1. Internal Electronic Library System of the University (IELSU)

№	Name of the electronic resource	Brief description (content)	Access conditions	Number of users
	Internal Electronic Library System (IELS)	Works of the academic staff of the Academy: textbooks and manuals, monographs, collections of scientific papers, scientific articles, dissertations, abstracts of dissertations, patents	from any computer located on the Internet, using an individual login and password [Electronic resource] – Access mode: http://95.79.46.206/login.php	Not limited

8.3.2. Electronic educational resources acquired by the University

№	Name of the electronic resource	Brief description (content)	Access conditions	Number of users
1	Electronic database "Student Consultant"	Educational literature + additional materials (audio, video, interactive materials, test tasks) for higher medical and pharmaceutical education. Publications are structured by specialties and disciplines in accordance with the current Federal State Educational Standards of Higher	from any computer located on the Internet, using an individual login and password [Electronic resource] – Access mode: http://www.studmedlib.ru/	General PRMU subscription

		Education.		
2	International scientometric database "Web of Science Core Collection"	Web of Science covers materials on natural, technical, social, and humanitarian sciences; takes into account the mutual citation of publications developed and provided by Thomson Reuters; has built-in capabilities for searching, analyzing, and managing bibliographic information.	Access is free from PIM computers [Electronic resource] – Access to the resource at: http://apps.webofknowledge.com	General PRMU subscription
3	Domestic electronic periodicals	Periodicals on medical subjects and on higher school issues	- from the computers of the academy on the platform of the electronic library eLibrary.RU -journals of the Media Sphere publishing house - from library computers or provided by the library at the request of the user [Electronic resource] – Access mode: https://elibrary.ru/	Not limited
4	Electronic library system "Bukap"	Educational and scientific medical literature of Russian publishers, including translations of foreign publications.	from any computer located on the Internet by login and password, from the computers of the academy. The subscription editions are available for reading. [Electronic resource] – Access mode: http://www.books-up.ru	General PRMU subscription

8.3.3 Open access resources

№	Name of the electronic resource	Brief description (content)	Access conditions
1	Scientific Electronic Library eLIBRARY.RU	The largest Russian information portal in the field of science, technology, medicine and	from any computer located on the Internet.

		education, containing abstracts and full texts of scientific articles and publications. [Electronic resource] – Access mode: https://elibrary.ru/	
2	Open Access Scientific Library Electronic Library CyberLeninka	Full texts of scientific articles with annotations published in scientific journals of Russia and neighboring countries. [Electronic resource] – Access mode: https://cyberleninka.ru/	from any computer located on the Internet

9. Material and technical support for mastering an academic discipline

9.1. List of premises for classroom activities for the discipline

1. *Lecture hall equipped with multimedia equipment and microphone.*
2. *Offices for conducting clinical practical classes*
3. *Multidisciplinary accreditation and simulation Center*
4. *Intensive care and Intensive care units of MLPU – clinical bases of the Department of Anesthesiology, Resuscitation and Transfusiology*

9.2. List of equipment for classroom activities for the discipline

1. *Multimedia complex*
2. *Information stands on the therapeutic and protective regime in MLPU, nutrition and hygiene of patients.*
3. *Medical documentation: medical history, outpatient card*
4. *Archival and educational case histories*
5. *Samples of the results of a general blood test.*
6. *Samples of urine test results.*
7. *Samples of the results of a biochemical blood test.*
8. *A set of electrocardiograms.*
9. *A set of radiographs for diseases of the lungs, heart and stomach.*
10. *Tonometers.*
11. *Phonendoscopes. Stethoscopes.*
12. *Tracking equipment (monitors).*
13. *Anesthesia and respiratory equipment*
14. *Equipment for infusion and transfusion therapy*
15. *Equipment for electro-pulse therapy*
16. *Extracorporeal detoxification equipment*
17. *Slides and multimedia presentations of lectures.*
18. *Simulators for practicing the skills of emergency care and CPR II-III and VI levels*

9.3. A set of licensed and freely distributed software, including domestic production

Item no.	Software	number of licenses	Type of software	Manufacturer	Number in the unified register of Russian software	Contract No. and date
1	Wtware	100	Thin Client Operating System	Kovalev Andrey Alexandrovich	1960	2471/05-18 from 28.05.2018
2	MyOffice is Standard. A corporate user license for educational	220	Office Application	LLC "NEW CLOUD TECHNOLOGIES"	283	without limitation, with the right to receive updates for 1

	organizations, with no expiration date, with the right to receive updates for 1 year.					year.
3	LibreOffice		Office Application	The Document Foundation	Freely distributed software	
4	Windows 10 Education	700	Operating systems	Microsoft	Azure Dev Tools for Teaching Subscription	
5	Yandex. Browser		Browser	«Yandex»	3722	
6	Subscription to MS Office Pro for 170 PCs for FGBOU VO "PIMU" of the Ministry of Health of Russia	170	Office Application	Microsoft		23618/HN10030 LLC "Softline Trade" from 04.12.2020

10. List of changes to the working program (to be filled out by the template)

Federal State Budgetary Educational Institution of Higher Education
"Privolzhsky Research Medical University"
Ministry of Health of the Russian Federation
(FSBEI HE "PRMU" of the Ministry of Health of Russia)

Department of
ANESTHESIOLOGY, RESUSCITATION AND TRANSFUSIOLOGY

CHANGE REGISTRATION SHEET

working program for the academic discipline
ANESTHESIOLOGY AND INTENSIVE CARE

Field of study / specialty / scientific specialty: _____
(code, name)

Training profile: _____
(name) - for master's degree programs

Mode of study: _____
full-time/mixed attendance mode/extramural

Position	Number and name of the program section	Contents of the changes made	Effective date of the changes	Contributor's signature
1				

Approved at the department meeting
Protocol No. _____ of _____ 20__

Head of the Department

department name, academic title

signature

print name