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RUDN University

Institute of Medicine

educational division (faculty/institute/academy) as higher education programme developer

COURSE SYLLABUS

Anesthesiology, Resuscitation and Intensive care

course title

Recommended by the Didactic Council for the Education Field of:

31.05.01 General Medicine

field of studies / speciality code and title

The course instruction is implemented within the professional education programme of higher education:

General Medicine

higher education programme profile/specialisation title

2024

1. THE GOALS OF MASTERING THE DISCIPLINE

The aim of this discipline is to form the concept of "Anesthesiology, Resuscitation and Intensive care" among students, develop mechanisms of critical conditions, methods of their diagnosis and treatment; train students to provide cardiac pulmonary resuscitation; provide adequate medical care in critical conditions (shock, acute respiratory failure, coma).

2. REQUIREMENTS TO LEARNING OUTCOMES

The mastering of the discipline «**Anesthesiology**, **Resuscitation**, and **Intensive Care**» is aimed at the formation of the following competencies of students:

Table 2.1. The list of competencies formed by students during the development of the discipline (results of the mastering of the discipline)

Competence code	Competence	Indicators of competence achievement (within the framework of this discipline)
GC-1	Being able to implement critical analysis of problem situations based on systems approach, develop an action strategy	GC-1.1. Analyzing scientific and technical literature and regulatory documents of medical institutions. GC-1.2. Assessing in a critical way the reliability of information sources, working with contradictory information from different sources. GC-1.3. Understanding the trends, strategic goals, problems in the field of healthcare/ being aware of regulatory framework to develop a strategy. GC-1.4. Analyzing and assessing the economic potential, financial viability and risks of an organization.
GC-8	Being able to create and maintain safe conditions in everyday life and professional activity to protect natural environment, ensure sustainable development of society, including in the event of a threat and occurrence of emergencies and military conflicts	GC-8.1. Being aware of the causes, signs and consequences of hazards, methods of protection against emergencies; basics of life safety, phones of rescue services. GC-8.2. Being able to identify signs, causes and conditions of emergencies; assess the likelihood of a potential hazard for a student and take measures to prevent it in an educational institution; provide first aid in emergencies. GC-8.3. Being able to use the methods of predicting the hazardous or emergency situations; mastering skills to maintain a safe living environment.
GPC-1	Being able to implement moral and legal norms, ethical and deontological principals in professional activity	GPC-1.1. Being able to abide by the ethical standards and legal regulations inprofessional activity. GPC-1.2. Being able to present professional information in the process of intercultural interaction observing the principles of ethics and deontology.

GPC-2	effectiveness of preventive	GPC-2.1. Being able to analyze the awareness of the population of a healthy lifestyle and medical literacy. GPC-2.2. Being able to develop a plan of organizational and methodical measures aimed at increasing the awareness of the population of a healthy lifestyle, its literacy concerning disease prevention issues.
		GPC-2.3. Being able to prepare an oral presentation

Competence code	Competence	Indicators of competence achievement (within the framework of this discipline)
		or a printed text which promote a healthy lifestyle and increase the population's literacy concerning disease prevention issues.
GPC-4	Being able to use medical devices provided for by the procedure for medical care, and conduct patient examinations in order to determine a diagnosis	GPC-4.1. Being able to use medical devices in accordance with the current procedures for the provision of medical care, clinical guidelines (treatment protocols) on the provision of medical care, care taking into accounts the medical care standards. GPC-4.2. Being able to assess the effectiveness and safety of medical devices. GPC-4.3. Mastering the technique of performing typical medical procedures using medical devices provided for by the procedures for medical care provision.
GPC-5	Being able to assess morpho- functional, physiological conditions and pathological processes in the human body to solve professional tasks	GPC-5.1. Mastering the algorithm of clinical, laboratory and functional diagnosis when dealing with professional tasks. GPC-5.2. Being able to evaluate the results of clinical, laboratory and functional diagnosis when dealing with professional tasks. GPC-5.3. Being able to determine morpho- functional, physiological states and pathological processes of the human body.
GPC-6	Being able to organize patient care, provide primary health care, arrange work and make professional decisions in emergency conditions at the prehospital stage, in emergency situations, epidemics and in foci of mass destruction.	GPC-6.1. Mastering the algorithm for providing first aid in emergency conditions, including in extreme conditions and foci of mass destruction. GPC-6.2. Being able to identify the conditions which require emergency medical care, including clinical signs of sudden cessation of blood circulation and respiration. GPC-6.3. Being able to provide emergency medical care to patients in conditions that pose a threat to the life of a patient, including clinical death (cessation of the vital bodily functions (blood circulation and (or) breathing).

GPC-8	Being able to implement and monitor the efficacy of	GPC-8.1. Being able to determine the medical indications for medical rehabilitation measures,
	medical rehabilitation of a	including when implementing an individual
	patient, including when	rehabilitation or habilitation programs for persons
	implementing individual	with disabilities.
	rehabilitation and	GPC-8.2. Being able to carry out measures of medical
	habilitation programs for	rehabilitation of a patient in accordance with the
	persons with disabilities;	current procedures for the provision of medical care,
	assess the patient's ability to	clinical guidelines (treatment protocols) on the
	work	provision of medical care taking into account the
		medical care standards.
		GPC-8.3. Being able to determine medical specialists
		for carrying out rehabilitation measures to a patient in

Competence code	Competence	Indicators of competence achievement (within the framework of this discipline)
		need of medical rehabilitation taking into account the diagnosis and in accordance with the current procedures for the provision of medical care. GPC-8.4. Being able to prescribe sanatorium- resort therapy to a patient in need of medical rehabilitation, including when implementing an individual rehabilitation or habilitation programs for persons with disabilities. GPC-8.5. Being able to monitor the implementation of rehabilitation measures and evaluate their efficacy and safety, including when implementing an individual programs for the rehabilitation or habilitation of persons with disabilities, taking into account the diagnosis in accordance with the current procedures for the provision of medical care.
GPC-10	Being able to understand the operation principles of modern IT and use them to solve professional tasks	GPC-10.1. Being able to use information technology in professional activity. GPC-10.2 Being able to observe the information security rules in professional activity. GPC-10.3. Being able to use information and communication technologies, including applied software for general and special purposes in dealing with professional tasks.

PC-1	Being able to provide emergency or urgent medical care to a patient	PC-1.1. Being able to assess the condition of a patient who needs emergency or urgent medical care. PC-1.2. Being able to recognize conditions that arise from sudden acute diseases, exacerbation of chronic diseases without obvious signs of a threat to the patient's life and which require emergency medical care. PC-1.3. Being able to provide emergency medical care to patients with sudden acute diseases, conditions, exacerbation of chronic diseases without obvious signs of a threat to the patient's life. PC-1.4. Being able to recognize conditions which pose a threat to the patient's life, including conditions of clinical death (cessation of the vital bodily functions (blood circulation and/or respiration) which require emergency medical care. PC-1.5. Being able to provide emergency medical care to patients in conditions which pose a threat to the patient's life, including clinical death (cessation of the vital bodily functions (blood circulation and/or respiration). PC-1.6. Being able to use drugs and medical devices when providing medical care in emergency or urgent forms.
PC-2	Being able to examine a	PC-2.1. Mastering the skills to collect complaints,

Competence	Competence	Indicators of competence achievement (within the	
code		framework of this discipline)	

code	Competence	framework of this discipline)
PC-4 Competence	Being able to implement and monitor the patient's medical rehabilitation efficacy, including when implementing individual rehabilitation and habilitation programmes for persons with disabilities; assess the patient's ability to Competence	PC-4.1. Being able to conduct an examination of temporary disability and work as part of a medical commission which examines temporary disability. PC-4.2. Being able to prepare necessary medical documentation to carry out medical and social examination in federal state institutions of medical and social examination. PC-4.3. Being able to carry out medical rehabilitation measures for a patient, including when implementing Indicators of competence achievement (within the
	patient in order to determine a diagnosis	anamnesis of the patient's life and disease, as well as conduct a complete physical examination of the patient (examination, palpation, percussion, auscultation). PC-2.2. Being able to make a preliminary diagnosis and make up a plan of laboratory and instrumental examinations of a patient. PC-2.3. Being able to refer a patient to a laboratory examination in case there are medical indications in accordance with the current procedures for the provision of medical care, clinical guidelines (treatment protocols) on the provision of medical care taking into account the medical care standards. PC-2.4. Being able to refer a patient to an instrumental examination in case there are medical indications in accordance with the current procedures for the provision of medical care, clinical guidelines (treatment protocols) on the provision of medical care. PC-2.5. Being able to refer a patient to consult with a medical specialist if there is a medical indication in accordance with the current procedures for the provision of medical care, clinical guidelines (treatment protocols) on the provision of medical care taking into account the standards of medical care. PC-2.6. Being able to refer a patient to be provided with specialized medical care in an inpatient setting or in a day hospital in case there are medical indications in accordance with the current procedures for the provision of medical care, clinical guidelines (treatment protocols) on the provision of medical care taking into account the standards of medical care. PC-2.7. Being able to carry out differential diagnosis with other diseases/conditions, including the urgent ones, as well as to make a diagnosis taking into account the current international statistical classification of diseases and problems related to health (ICD).

work an individual rehabilitation or habilitation programs for persons with disabilities, in accordance with the current procedures for the provision of medical care, clinical guidelines (treatment protocols) on the provision of medical care taking into account the standards of medical care. PC-4.4. Being able to refer a patient who needs medical rehabilitation to a medical specialist so that they prescribe and carry out medical rehabilitation measures, including when implementing an individual rehabilitation or habilitation program for persons with disabilities, in accordance with the current procedures for the provision of medical care, clinical guidelines (treatment protocols) on provision of medical care taking into account the standards of medical care. PC-4.5. Being able to refer a patient who needs medical rehabilitation to a medical specialist so that they prescribe and carry out sanatorium treatment, when implementing including an individual rehabilitation or habilitation programs for persons with disabilities, in accordance with the current procedures for the provision of medical care, clinical guidelines (treatment protocols) on the provision of medical care taking into account the standards of PC-4.6. Being able to assess the efficacy and safety of medical rehabilitation measures for a patient in accordance with the current procedures for the provision of medical care, clinical guidelines (treatment protocols) on the provision of medical care taking into accounts the standards of medical care. PC-4.7. Being able to refer a patient with a persistent dysfunction caused by diseases, consequences of trauma or defects to a medical and social examination.

3. THE COURSE IN THE HIGHER EDUCATION PROGRAMME STRUCTURE

The course **«Anesthesiology, Resuscitation, and Intensive Care»** refers to the Compulsory Disciplines of block B1 of the EP HE.

Within the framework of the Educational Program, students also master other disciplines and/or practices that contribute to expected learning outcomes of the course «Anesthesiology, Resuscitation, and Intensive Care».

Table 3.1. List of Higher Education Program disciplines that contribute to expected learning outcomes

Competence Code The C	competence	Previous Disciplines	Subsequent disciplines
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GC-1	Being able to implement critical analysis of problem situations based on systems approach, develop an action strategy	Physics; Mathematics; Anatomy; Hospital Therapy; Hygiene; Public Health and Healthcare, Healthcare Economics	Phthisiology
GC-8	Being able to create and maintain safe conditions in everyday life and professional activity to protect natural environment, ensure sustainable development of society, including in the event of a threat and occurrence of emergencies and military conflicts	Health and Safety	Disaster Medicine
GPC-1	Being able to implement moral and legal norms, ethical and deontological principals in professional activity	Jurisprudence (Law Fundamentals)	
GPC-2	Being able to monitor the effectiveness of preventive measures, healthy lifestyle formation and sanitary and hygienic education of the population	Biology; biochemistry	
GPC-4	Being able to use medical devices provided for by the procedure for medical care, and conduct patient examinations in order to determine a diagnosis	Physics	

GPC-5	Being able to assess		
	morpho-functional, physiological conditions and pathological processes in the human body to solve professional tasks	Biology; Biochemistry; microbiology, Virology	
GPC-6	Being able to organize patient care, provide primary health care, arrange work and make professional decisions in emergency conditions at the prehospital stage, in emergency situations, epidemics and in foci of mass destruction.	Health and Safety; Biology; Biochemistry; Topographic anatomy and operative surgery; Immunology	Disaster Medicine
GPC-8	Being able to implement and monitor the efficacy of medical rehabilitation of a patient, including when implementing individual rehabilitation and habilitation programs for persons with disabilities; assess the patient's ability to work	Medical rehabilitation	Endoscopic urology
GPC-10	Being able to understand the operation principles of modern IT and use them to solve professional tasks	Medical rehabilitation; general surgery; professional diseases	
PC-1	Being able to provide emergency or urgent medical care to a patient	Pathophysiology, Clinical Pathophysiology; Epidemiology; Medical rehabilitation; Infectious diseases; Pediatrics; obstetrics and gynecology	General Practitioner: Outpatient Physician's Assistant; Disaster Medicine; Oncology, radiation therapy
PC-2	Being able to examine a patient in order to determine a diagnosis	General surgery	Oncology, radiation therapy; Reproductive health

PC-4	Being able to implement and monitor the patient's medical rehabilitation efficacy, including when implementing individual rehabilitation and habilitation programmes for persons with disabilities; assess the	Medical rehabilitation	Forensic Medicine
	persons with disabilities; assess the patient's ability to work		
	WUIK		

4. THE DISCIPLINE WORKLOAD AND ACADEMIC ACTIVITIES

The total workload of the discipline **«Anesthesiology, Resuscitation and Intensive care»** is equal to **3** credits (108 hours).

Table 4.1. Types of academic activities during the period of the HE program mastering

Types of academic activit	ies	TOTAL, academic	ser	nesters
31		hours (ac.h)	В	
Classroom learning, ac.h.		108	108	
Lectures (Lec)				
Lab work (Lab)		51	51	
Seminars (workshops/tutorials)				
Self-study (ies), academic hours		39	39	
Evaluation and assessment (pass/fail grading)	exam or	18	18	
Total workload of the	ac.h.	108	108	
discipline	credits	3	3	

5. THE COURSE MODULES AND CONTENTS

Table 5.1. The content of the discipline and types of academic activities

Modules and Topics	Content of the topics	Type of academic activities
1. Anesthesiology	Basics and clinical aspects of modern anesthesiology.	Lab, Self- study (ies)
2. Resuscitation	Fundamentals of modern resuscitation.	Lab, Self- study (ies)
3. Intensive therapy	Diagnostics, Evaluation and treatments of critical illnesses.	Lab, Self- study (ies)

6. CLASSROOM EQUIPMENT AND TECHNOLOGY SUPPORT REQUIREMENT

The components of the possible material and technical base of RUDN University are used:

- Audience fund, material and technical fund, library fund
- Lecture hall, classrooms, operating rooms and intensive care units at clinical sites for practical training at City Clinical Hospital No. 64
- Lecture hall, educational television, intensive care unit at the clinical base for practical training at the FNKC RR

Table 6.1. Logistical and material provision of the discipline.

Classroom for Academic Activity Type	Classroom Equipment	Specialized educational/laboratory equipment, software and materials for the mastering of the discipline
Classroom and lecture hall at City Clinical Hospital No. 64	Multimedia projector, Internet access	Sets of videos, multimedia presentations made by the department.
Federal Research and Clinical Center for Intensive care and Rehabilitology, Building B Conference Hall	Multimedia projector, Internet access	Sets of videos, multimedia presentations made by the department.
Computer classes of the Faculty of Medicine, Information Library Center of the Peoples' Friendship University of Russia	Classes are equipped with access to the RUDN electronic library system, the Internet	Computer/laptop with installed software.
Classroom for students self-studies (Federal Research and Clinical Center for Intensive care and Rehabilitology, Building B Conference Hall)	Classroom for student's self-studies (can be used for seminars and consultations.)	Computer/laptop with installed software. Technical equipment: multimedia projector Installed software. multimedia projector with screen - Sets of videos, multimedia presentations made by the department

7. RECOMMENDED SOURSES FOR COURSE STUDIES

a. Main literature

- Metodicheskiye rekomendatsii po provedeniyu reanimatsionnykh meropriyatiy Soveta Yevropy po reanimatsii. Moskva. 2015
- Neotlozhnyye sostoyaniya. Uchebnoye posobiye dlya studentov. Pod redaktsiyey prof. S.A.Sumina. 9-ye izd., Moskva, 2017.
- Dolina O.A. «Anesteziologiya i reanimatologiya» Uchebnik dlya VUZov, GEOTAR, 2010g.
- Sumin. S.A. i dr. Anesteziologiya i reanimatologiya. Uchebnoye posobiye v 2-kh t.— M.: OOO «Meditsinskoye informatsionnoye agentstvo», 2015. 928 S.

b. Additional literature

• Lilli L. Patofiziologiya serdechno-sosudistoy sistemy. M..Binom. 2010

- Terapevticheskaya Gipotermiya. Shevelov O.A., Grechko A.V., Petrova M.V. Moskva, 2019.
- Fedorovskiy N.M. Rukovodstvo k prakticheskim zanyatiyam po anesteziologii, reanimatologii i intensivnoy terapii : uchebnoye posobiye / N.M. Fedorovskiy MIA, 2003. 280 s
- Belyayevskiy A.D. Anesteziologiya i reanimatologiya: zadachi, voprosy i otvety s raz"yasneniyami: uchebnoye posobiye / A.D. Belyayevskiy Feniks, 2016. 315 s.
- 1. Electronic libraries with access for RUDN students:
 - -Electronic library network of RUDN ELN RUDN http://lib.rudn.ru/MegaPro/Web
 - ELN «University Library online» http://www.biblioclub.ru
 - ELN Urait http://www.biblio-online.ru
 - ELN «Student Advisor» www.studentlibrary.ru
 - ELN «Lan» http://e.lanbook.com/
- 2. Databases and search engines:
 - electronic fund of legal and regulatory and technical documentation http://docs.cntd.ru/
 - search system Yandex https://www.yandex.ru/
 - search system Google https://www.google.ru/
 - Medical portal meduniver. Contains a medical photo-atlas, videos on various branches of medicine, medical electronic library http://meduniver.com/ Russian anesthetic server Rusanesth.com

Learning toolkits for self-studies during the development of the discipline

- 1. Lectures Synopsis on the discipline «Anesthesiology, Resuscitation and Intensive care».
- 2. Methodological guidelines for the implementation and execution of control and independent work on the discipline «Anesthesiology, Resuscitation and Intensive care»
- * All teaching materials for self-studying of students are placed in accordance with the current procedure on the discipline page in the RUDN LMS TUIS.

8. EVALUATION TOOLKIT AND GRADE SYSTEM FOR ASSESSMENT

Evaluation Toolkit (ET) and a point-rating system (PRS)* for assessment the level of competence formation (part of competencies) based on the results of mastering the discipline "Medical rehabilitation" are presented in the Appendix to this Work Program of the discipline.

* - ET and PRS are formed on the basis of the requirements of the relevant local regulatory act of the RUDN

DEVELOPERS:

Assoc	ciate professor of	the	Depart	ment of Anesthesiology		
and	Resuscitation	with	Medical	M.V.Vatsik-Gorodetskaya	 Rehabilitation	Course
Assis	tant of the Depar	tment of	f			
Anes	thesiology and R	esuscita	tion			

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Department of Anesthesiology	a <u>Rehabilitation Course</u>