

**MINISTRY OF SCIENCE, HIGHER EDUCATION AND INNOVATION OF THE KYRGYZ  
REPUBLIC**

Kyrgyz-Russian Slavic University  
named after the first President of the Russian Federation B.N. Yeltsin



## Anesthesiology, resuscitation, intensive care

### The working program of the discipline (module)

Assigned to the department	<b>Hospital surgery</b>	
The curriculum	310501_22_6 лд ин.plx Specialty 31.05.01. - РФ, 560001 - КР Лечебное дело (for foreign students)	
Qualification	Specialist	
The form of education	Full-time	
Total labor intensity	<b>3 ZET</b>	
Hours according to the including:	108	Types of control in semesters: credit with a score of 12
classroom classes	64	
independent work	43,7	

#### The distribution of discipline hours by semester

Semester (<Course>.<Semester on the course>)	12 (6.2)		Total	
	weeks		18	
Type of work	УП	РП	УП	РП
Lectures	16	16	16	16
Practice	48	48	48	48
Contact work during the theoretical training period	0,3	0,3	0,3	0,3
Including int.	3	3	3	3
Total auditorium classes	64	64	64	64
Contact work	64,3	64,3	64,3	64,3
Independent work	43,7	43,7	43,7	43,7
Total	108	108	108	108

### 1. OBJECTIVES OF THE DISCIPLINE DEVELOPMENT

1.1	The objectives of the students' development of the discipline "Anesthesiology, resuscitation, intensive care" are to gain knowledge to understand the general principles of anesthesiology, mechanisms of death, clinical physiology of terminal and critical conditions, methods of clinical and laboratory assessment of their severity, mastering the methods of resuscitation and intensive therapy. Knowledge of anatomy, physiology, pathophysiology, pharmacology, and clinical disciplines is required for full-fledged learning. In turn, knowledge of the basics of anesthesiology and intensive care services, methods of diagnosis of terminal and critical conditions and their intensive care, will improve the effectiveness of treatment of serious patients and victims of emergency conditions.
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### 2. THE PLACE OF DISCIPLINE IN THE STRUCTURE OF THE MAIN EDUCATIONAL PROGRAM (OOII)

Cycle (section):	Б1.Б
<b>2.1</b>	<b>Requirements for the student's pre-training:</b>
2.1.1	To fully master the academic discipline "Anesthesiology, resuscitation, intensive care", knowledge of the following disciplines is required:
2.1.2	Chemistry
2.1.3	Biochemistry
2.1.4	Normal physiology
2.1.5	Physics, mathematics
2.1.6	Anatomy
2.1.7	Topographic anatomy and operative surgery
2.1.8	Practice in Emergency Medical procedures (Fundamentals of Emergency Care)
2.1.9	Latin language
2.1.10	Pharmacology
2.1.11	Clinical pharmacology
2.1.12	General Surgery
2.1.13	Propaedeutics of internal diseases
2.1.14	Pathological anatomy
2.1.15	Pathophysiology, clinical pathophysiology
<b>2.2</b>	<b>Disciplines and practices for which the development of this discipline (module) is necessary as a precursor:</b>
2.2.1	Knowledge of the basics of anesthesiological and intensive care services, methods of diagnosis of terminal and critical conditions and their intensive care, will increase the effectiveness of mastering the following disciplines:
2.2.2	Traumatology, orthopedics
2.2.3	Disaster Medicine
2.2.4	Practice in emergency medical procedures (assistant to the doctor anesthesiologist - resuscitator)
2.2.5	Practice in emergency medical procedures (Assistant to an emergency medical doctor)
2.2.6	Preparation for passing the state exam

### 3. THE STUDENT'S COMPETENCIES FORMED AS A RESULT OF MASTERING THE DISCIPLINE (MODULE)

**PC-10. The ability to identify the patient's main pathological conditions, symptoms, disease syndromes, and nosological forms in accordance with the International Statistical Classification of Diseases and Health-Related Problems, 10 revision**

**To know:**

Level 1	Research methods for identifying the main pathological conditions, symptoms, disease syndromes, and nosological forms. The specifics of identifying various types of pathological conditions, symptoms, disease syndromes, and nosological forms in accordance with the ICD-10 ver. The main syndromes of organ and system damage and their specifics in the differential diagnosis of various diagnostic forms in accordance with the ICD-10 ver.
Level 2	
Level 3	

**To have skills:**

Level 1	To comprehend the obtained results of the study of the main nosological forms of the disease. Analyze various types of pathological conditions, symptoms, disease syndromes, and nosological forms in accordance with the ICD.
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Level 2	
Level 3	
<b>To possess:</b>	
Level 1	Proficiency in basic pathological conditions and disease syndromes. Methods of searching, identifying and systematizing symptoms, syndromes, diseases, nosological forms in accordance with ICD-10 rev. Skills of self-justification of combining various symptoms and syndromes into nosological forms in accordance with (ICD-10 rev.).
Level 2	
Level 3	

**PC-11: Willingness to participate in the provision of emergency medical care in conditions requiring urgent medical intervention**

<b>To know:</b>	
Уровень 1	The algorithm of emergency medical care; basic medical diagnostic measures for the provision of first aid in urgent conditions requiring urgent medical intervention.
Level 1	
Level 3	
<b>To have skills:</b>	
Level 1	Choose an individual type of care for the patient's treatment according to the situation: first aid, ambulance, hospitalization.
Level 2	
Level 3	
<b>To possess:</b>	
Level 1	A complex of resuscitation measures in acute respiratory and circulatory disorders, in clinical death; to know modern methods of resuscitation and intensive care in providing care to patients and victims in critical conditions of various etiologies.
Level 2	
Level 3	

**PC-13: Willingness to participate in providing medical assistance in emergency situations, including participation in medical evacuation**

<b>To know:</b>	
Level 1	The foundations of the formation of a safety culture, environmental awareness and risk-based thinking in which issues of safety and environmental conservation are considered as the most important priorities of human life.
Level 2	
Level 3	
<b>To have skills:</b>	
Level 1	To understand the doctrine of the epidemic process, the types of epidemiological studies and their purpose; to carry out epidemic prevention measures, to protect the population in the foci of particularly dangerous infections, in case of deterioration of the radiation situation and natural disasters; To identify the harmful effects of environmental factors on the human body. Features of the course and possible complications of the most common diseases, diagnostic methods, modern methods of clinical and laboratory instrumental examination of patients. Analyze the organization's features providing medical care during mass and sporting events, in emergency situations and disasters in peacetime and wartime.
Level 2	
Level 3	
<b>To possess:</b>	
Level 1	Methods of organizing a set of measures aimed at strengthening and preserving health and eliminating harmful factors. Skills in analyzing and evaluating the quality of medical care, the health status of the population and the impact of environmental and industrial factors on it. Skills to prevent the occurrence and spread of diseases, their early diagnosis and the causes of their occurrence. Skills in carrying out preventive, hygienic and anti-epidemic measures. The ability to choose an individual type of assistance in the treatment of a patient in accordance to the situation: first aid, ambulance, hospitalization.
Level 2	
Level 2	

**As a result of mastering the discipline, the student must:**

<b>3.1</b>	<b>To know:</b>
3.1.1	- the organization and basic principles of the activities of the units of the anesthesiology, resuscitation and intensive care service of medical and preventive organizations of the Kyrgyz Republic (Order of the Ministry of Health of the Kyrgyz Republic No. 767, dated 2009) and the Russian Federation (order of the Ministry of Health)
3.1.2	- general issues of anesthesiology and intensive care medicine - definitions, tasks, terminology;
3.1.3	- principles of anesthetic aid, fundamentals of algology;
3.1.4	- terminal condition, types of death and their signs;
3.1.5	- intensive care unit - cardiopulmonary and cerebral resuscitation (BLS, ALS);
3.1.6	- disease of a revived organism (post-resuscitation disease);
3.1.7	- definitions, classification, clinical picture, pathomorphology (remodeling of internal organs) and basic principles of intensive care for critical conditions in: acute respiratory failure, acute circulatory failure, acute cerebral insufficiency, acute hepatic and renal insufficiency, acute disorders of the physico-chemical properties of blood (CBS, EBV, hemostasis), acute exogenous and endogenous intoxication;
3.1.8	- features of emergency care and resuscitation measures for victims of drowning, electrical trauma, strangulation asphyxia, prolonged compression syndrome, general overheating and cold injury, convulsive syndrome;
3.1.9	- modern methods of infusion-transfusion therapy (including transfusion of blood components), nutritional support, detoxification (forced diuresis, extracorporeal methods, enterosorption), hyperbaric oxygenation (HBO);
3.1.10	- clinical and pharmacological characteristics of the main groups of drugs and the rational choice of specific drugs in the treatment of major pathological syndromes of diseases and emergency conditions in patients;
<b>3.2</b>	<b>To have skills:</b>
3.2.1	- according to the patient's condition (clinical manifestations), assess the activity of the pathological process, its form, stage and phase of the course, in order to make a decision on the need for medical care;
3.2.2	- to set priorities for solving the patient's health problems, including determining indications and contraindications for surgery, anesthesia and their urgency;
3.2.3	- determine the premedication method and evaluate the adequacy of anesthesia based on clinical signs;
3.2.4	- possess the simplest methods of pain relief when performing painful procedures and interventions for the relief of acute and chronic pain syndromes;
3.2.5	- to carry out resuscitation measures and monitor their effectiveness in case of clinical death;
3.2.6	- ensure free airway passage: triple Safar intake, Gwedel duct (T-shaped), Safar duct (S-shaped), epiglottis duct (i-gel), laryngeal mask, combitube, endotracheal tube;
3.2.7	- perform the simplest techniques of artificial ventilation of the lungs "from mouth to mouth", "from mouth to nose", with an Ambu bag;
3.2.8	- intubate the trachea on a mannequin;
3.2.9	- determine the indications for artificial lung ventilation, hyperbaric oxygenation, bronchoscopy, conicotomy, tracheostomy;
3.2.10	- be able to perform chest compression (indirect heart massage) on a mannequin;
3.2.11	- to determine by ECG the type of cardiac arrhythmia and conduction, type of cardiac arrest, acute myocardial infarction, pulmonary embolism;
3.2.12	- determine indications for puncture and catheterization of the main vessels;
3.2.13	- to form a scheme of non- and drug treatment of the patient in critical and urgent conditions;
3.2.14	- calculate the qualitative volume of infusion – transfusion therapy for water-electrolyte balance and acid-base balance disorders;
3.2.15	- identify life-threatening bleeding disorders, determine indications for hemotransfusion, and evaluate the suitability of blood products for transfusion;
3.2.16	- calculate the body's needs for carbohydrates, proteins and fats during nutritional support (enteral, parenteral and mixed nutrition).
<b>3.3</b>	<b>To possess:</b>
3.3.1	- in the algorithm of making a preliminary diagnosis for the subsequent referral of the patient to a specialized doctor;
3.3.2	- in the methods of general clinical examination;
3.3.3	- interpretation of the results of laboratory and instrumental diagnostic methods;

3.3.4	- in carrying out basic medical diagnostic and therapeutic measures to provide first aid in urgent and life-threatening conditions;
3.3.5	- in presenting an independent point of view, analysis and logical thinking, public speaking, ethical argumentation, discussions and round tables, principles of medical deontology and medical ethics;
3.3.6	- informing patients and their relatives;
3.3.7	- proficiency in a foreign language to the extent necessary for communication and obtaining information from foreign sources.