

**MINISTRY OF HEALTH
OF THE KYRGYZ REPUBLIC**

**I.K. AKHUNBAEV KYRGYZ STATE
MEDICAL ACADEMY**

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**Basic professional educational program
training in clinical residency for foreign citizens**

specialty: "Critical Care Medicine"

Normative period of study: **THREE (3) YEARS**

No	Name of disciplines according to GOS	Distribution of curriculum time by types of classes		Distribution of hours by years		
		Total labor intensity		1 st year	2 nd year	3 rd year
		in credits	in hours	week	week	week
1st year of study						
	Block 1. Disciplines (modules)	7.68	230.4	46		
	<i>Obligatory disciplines</i>	0.5	15			
	<i>Special disciplines</i>	1.4	40			
	Critical care medicine					
	Infectious diseases	1.15	33			
	ORL-diseases	0.3	10			
	Ophthalmology	0.3	10			
	Urology	0.3	10			
	Obstetrics-gynecology	1.15	32			
	Pathology	0.3	10			
	Pedagogy	0.3	10			
	Public health and health care	0.3	10			
	Legal science	0.3	10			
	Disaster medicine	0.5	15			
	Critical medical care for patients with cardiovascular diseases. Providing medical assistance to victims of road traffic accidents. Providing medical care to patients with cardiac emergencies.	0,68	25			
	Block 2. Practical training	69.13	1983.6	46		
	Block 2.1. Basic part	68	1950			

	<i>(practice in specialty “Critical care medicine” (clinical residency))</i>					
	Block 2.2. Elective courses Ambulance and critical care (including GMP simulation course)	1.12	33.6			
	Block 3. Final state attestation	3	90	2		
	TOTAL	76.8	2304	48		
1	Organization of critical medical care	0.16		2		
2	Organization of medical assistance to the population at the pre-hospital stage. Organization of medical assistance in accidents, catastrophes and natural disasters.	0.16		2		
3	Fundamentals of medical ethics and medical deontology.	0.16		2		
4	Fundamentals of labor law. Legal aspects of the work of an critical care physician.	0.16		2		
5	Organization of work of an critical medical setting.	0.16		2		
6	Fundamentals of medical statistics, recording and analysis of main indices of critical medical care.	0.16		2		
7	Principles of record keeping in critical medical care.	0.16		2		
8	KR legislation in the sphere of health care.	0.16		2		
9	Prevalence of diseases among the population.	0.16		2		
10	Structure of calls of critical medical aid.	0.16		2		
11	Peculiarities of work of line teams and teams of intensive care.	0.16		2		
12	Equipping ambulances.	0.16		2		
13	Work with ambulances equipment.	0.16		2		
14	Fundamentals of criminal law.	0.16		2		
15	Fundamentals of medical insurance.	0.16		2		
16	Fundamentals of the national strategy in the sphere of improvement of critical medical care.	0.16		2		
17	Principles of critical medical care.	0.16		2		
18	Standards of critical medical care.	0.16		2		

19	Indications for hospitalization of patients.	0.16		2		
20	Basics of resuscitation and intensive care. Classification of terminal states.	0.16		2		
21	Cardiopulmonary resuscitation (BLS, ALS) Use of defibrillators.	0.16		2		
22	Critical care for diseases of cardiovascular and respiratory systems.	0.16		2		
23	Normal ECG in traditional and additional leads. Normal ECG. Genesis of abnormal waves and intervals. Conclusion on ECG.	0.16		2		
24	ECG at acute coronary syndrome. CHD, clinic, diagnosis of chest pain.	0.16		2		
25	Acute myocardial infarction, diagnostics. Differential diagnosis of pain in the chest. Complications of AMI, emergency aid. ECG at AMI complications. ECG of recurrent infarction, differential diagnosis. Clinical analysis.	0.16		2		
26	Heart rhythm disorders. Treatment principles of heart rhythm disorders. ECG diagnostics of heart rhythm disorders.	0.16		2		
27	ECG at bradyarrhythmia. Bradyarrhythmia. Emergency aid.	0.16		2		
28	ECG at tachyarrhythmia. Tachyarrhythmia, Emergency aid.	0.16		2		
29	Emergencies at arrhythmias. ECG diagnostics at WPW syndrome. ECG at His bundle branch block. ECG features in patients with implanted cardio-stimulator.	0.16		2		
30	Extrasystole, parasystole, topical diagnosis.	0.16		2		
31	Acute vascular pathology: pulmonary embolism, dissecting aortic aneurysm. Emergency aid.	0.16		2		
32	Hypertension. ECG at hypertension, hypertension crisis. Hypertensive crisis. Emergency aid. Sorting out the patients.	0.16		2		
33	Symptomatic hypertension	0.16		2		
34	Acute arterial hypotension.	0.16		2		

35	Chronic cardiac insufficiency, clinic and emergency therapy. Chronic pulmonary heart, small vessel diseases	0.16		2		
36	Non-coronarogenic myocardial damages. Inflammatory diseases of myocardium. ECG in myocarditis, myocardiodystrophies and cardiac traumas.	0.16		2		
37	Acute lung diseases. Diagnostics, emergency aid (pneumonias, pleurisy, atelectasis). Modern principles of treatment.	0.16		2		
38	Bronchial asthma. Current principles of treatment. Status Asthmaticus. Emergency management	0.16		2		
39	Pulmonary edema, emergency care	0.16		2		
40	Algorithms of examination of cardiac patients at the pre-hospital stage. Errors in the examination and treatment of patients. Management of atypical presentations	0.16		2		
41	Algorithms of examination of patients with acute respiratory failure. Emergency measures in ARF (tapping of pleural cavity, management of pneumothorax, ICT insertion)	0.16		2		
42	Treatment of patients with acute respiratory failure. Management of types respiratory failures	0.16		2		
43	Methods of secure upper airway. LMA airway , EndoTracheal intubation , Direct and Video assisted	0.16		2		
44	Laryngospasm: causes, clinical picture, diagnosis, management protocols	0.16		2		
45	Mechanical Lung Ventilation methods	0.16		2		
46	Basic resuscitation manipulations: tracheostomy, cricothyrotomy, pleurocentesis, paracentesis of pericardium puncture.	0.16		2		
		7.68		92		
		7.68	230.4		92	
	Block 2. Practical training	69.12	1983.6		46	
	Bloc 3. Attestation	3	90		2	
	TOTAL	7.68	2304		48	
	Block 2. Practical training	69.12	1983.6	46		

	Block 2.1. (practice in specialty “critical care medicine” (clinical residency))	68	1950			
	Block 2.2. Elective courses Ambulance and critical care (including GMP simulation course)	1.12	33.6			
	Block 3. Final stage attestation	3	90	2		
	TOTAL	76.8	2304	48		
2nd year of study						
1	Acute disorders of cerebral circulation. Indications for cardiopulmonary resuscitation, methods of its implementation, conditions for refusal of resuscitative actions.	0,16			2	
2	Basic manipulations in resuscitation. Laryngospasm. Causes. Clinical presentation & Diagnostics. Rendering emergency and intensive care.	0,16			2	
3	Acute respiratory failure. Diagnosis and management	0,16			2	
4	Laryngospasm. Causes. Clinical picture. Diagnostics. Pre-hospital management tactics.	0,16			2	
5	Thromboembolism of the pulmonary artery. Causes. Classification. Clinical picture. Diagnostics. Rendering emergency and intensive care.	0,16			2	
6	Bronchial asthma. Classification. Clinical picture. Diagnostics. Emergency and intensive care of bronchial asthma attack and status asthmaticus	0,16			2	
7	Lung atelectasis and collapse Causes, Clinical picture. Diagnostics, management. Indications of hospitalization.	0,16			2	
8	Pneumothorax. Causes. Clinical picture. Diagnostics. Emergency and intensive therapy. Indication of hospitalization.	0,16			2	
9	Pneumonia. Causes. Clinical picture. Diagnostics. Emergency and intensive therapy. Indications for hospitalization	0,16			2	
10	Pleural fluid. Causes. Clinical picture. Diagnostics. Chest tube management. Emergency and intensive therapy. Indications for hospitalization	0,16			2	

11	Pulmonary hemorrhage/hemoptysis . Causes. Clinical picture. Diagnostics. Emergency and intensive therapy. Indications for hospitalization	0,16			2	
12	Myocardial infarction. Causes. Clinical picture. Diagnostics. Emergency and intensive therapy. Indications for hospitalization.	0,16			2	
13	Acute left ventricular failure. Causes. Clinical picture. Diagnostics. Emergency and intensive therapy, NIV. Indications for hospitalization.	0,16			2	
14	Hypertensive crisis. Causes. Clinical picture. Diagnostics. Emergency and intensive therapy. Indications for hospitalization.	0,16			2	
15	Paroxysmal supraventricular tachycardia. Causes. Clinical picture. Diagnostics. Emergency and intensive therapy. Indications for hospitalization.	0,16			2	
16	Paroxysm of atrial fibrillation. Causes. Clinical picture. Diagnostics. Emergency and intensive therapy. Indications for hospitalization.	0,16			2	
17	Paroxysmal ventricular tachycardia. Causes. Clinical picture. Diagnostics. Emergency and intensive therapy. Indications for hospitalization.	0,16			2	
18	AV conduction disorders with the development of syncope (Morgagni-Adams-Stokes syndrome). Causes. Clinical picture. Diagnostics. Emergency and intensive therapy. Indications for hospitalization.	0,16			2	
19	Acute renal failure. Causes. Clinical picture. Diagnostics. Hemodialysis and CRRT. Emergency and intensive therapy. Indications of hospitalization.	0,16			2	
20	Acute and chronic glomerulonephritis. Causes. Clinical picture. Diagnostics. Emergency and intensive therapy. Indications of hospitalization.	0,16			2	
21	Acute and chronic pyelonephritis. Causes. Clinical	0,16			2	

	picture. Diagnostics. Emergency and intensive therapy. Indications for hospitalization.					
22	Acute retention of urine. Causes. Clinical picture. Diagnostics. Emergency and intensive therapy. Indications of hospitalization.	0,16			2	
23	Renal colic. Causes. Clinical picture. Diagnostics. Emergency and intensive therapy. Indications for hospitalization.	0,16			2	
24	Acute hepatic failure & encephalopathy Emergency and intensive care. Indications for hospitalization. Rules of hospitalization.	0,16			2	
25	Gallstone colic. Causes. Clinical picture. Diagnostics. Emergency and intensive therapy. Indications for hospitalization. Rules of hospitalization.	0,16			2	
26	Acute ulcers. Causes. Clinical picture. Diagnostics. Emergency and intensive therapy. Indications for hospitalization	0,16			2	
27	Gastrointestinal hemorrhage. Causes. Clinical picture. Diagnostics. Emergency and intensive therapy. Indications for hospitalization.	0,16			2	
28	Acute abdominal pain. Causes. Clinical picture. Diagnostics. Emergency and intensive therapy. Indications for hospitalization. ICU care.	0,16			2	
29	Ascites. Causes. Clinical picture. Diagnostics. Emergency and intensive therapy. Indications for hospitalization. ICU care.	0,16			2	
30	Acute pancreatitis. Clinical picture. Diagnostics. Emergency and intensive therapy. Indications for hospitalization. ICU care.	0,16			2	
31	Shock. Classification. Clinical picture. Diagnostics. Emergency and critical care hospital management protocols. ICU care.	0,16			2	
32	Methyl alcohol poisoning. Clinical picture. Diagnostics. Emergency and intensive therapy. Indications for hospitalization. ICU care.	0,16			2	

33	Ethyl alcohol poisoning Clinical picture, diagnosis, emergency and intensive care Indications for hospitalization				2	
34	Ethylene glycol (antifreeze substance) poisoning. Clinical picture. Diagnostics. Emergency and intensive therapy. Indications for hospitalization	0,16			2	
35	Dichloroethane poisoning. Clinical picture. Diagnostics. Emergency and Intensive therapy, indications for hospitalization	0.16			2	
36	Poisoning with poisonous mushrooms (fly agaric, false honey mushrooms, morels, death-cups). Diagnostics. Emergency and intensive therapy, indications for hospitalization,	0.16			2	
37	Snake venom poisoning. Diagnostics. Emergency and intensive therapy, indications for hospitalization	0.16			2	
38	Poisoning by concentrated acids (nitric acid, acetic acid, sulfuric acid). Diagnostics. Emergency and intensive therapy, indications for hospitalization,	0.16			2	
39	Alkali poisoning. Diagnostics and ICU Management	0.16			2	
40	Hemp poisoning (hashish, marijuana, anasha, plan).	0.16			2	
41	Poisoning with pharmacological preparations of various groups.	0.16			2	
42	Modern methods of treatment of acute poisoning. Principles of detoxification. Antidote therapy.	0.16			2	
43	Poisoning with plant and animal poisons.	0.16			2	
44	Pathologic syndromes in acute poisoning.	0.16			2	
45	Algorithms of examination of patients with acute poisoning.	0.16			2	
46	Acute poisoning with amystic poisons. Errors of the pre-hospital stage.	0.16			2	
		7.68	230.4		92	
	Block 2. Practical training	69.12	1983.6		46	
	Block 3. Attestation	3	90		2	
	TOTAL	76.8	2304		48	
3rd year of study						
	Block 1. Resuscitation and Intensive treatment (IT) of critical conditions	7.68	230.4			46

1	Resuscitation and IT in acute cardiovascular failure	0.16	2			
2	Resuscitation and IT in various forms of respiratory failure	0.16	2			
3	Resuscitation and IT in infectious diseases and septic conditions	0.16	2			
4	Resuscitation and IT of children and newborns	0.16	2			
5	Resuscitation and IT at acute intoxication	0.16	2			
6	Resuscitation and IT in traumatology and orthopedics	0.16	2			
7	Resuscitation and IT at ACVA and in acute neuro-traumatology patients	0.16	2			
8	Resuscitation and IT at surgical pathology	0.16	2			
9	Resuscitation and IT at obstetrics and gynecology	0.16	2			
10	IHD, clinical picture, diagnosis of breast-pang	0.16	2			
11	Acute myocardial infarction, diagnostics	0.16	2			
12	Differential diagnosis of cardiac pain	0.16	2			
13	ECG in acute coronary syndrome	0.16	2			
14	Complications of AMI, differential diagnosis, emergency care	0.16	2			
15	Acute vascular pathology: pulmonary embolism, aortic dissecting aneurysm. Emergency and ICU care	0.16	2			
16	ECG at complications of AMI	0.16	2			
17	ECG at reinfarctions, differential diagnostics. Clinical analysis	0.16	2			
18	Cardiac rhythm disorders. Treatment principles of cardiac rhythm disorders.	0.16	2			
19	Hypertensive disease	0.16	2			
20	Modern principles of treatment	0.16	2			
21	Symptomatic hypertensions					
22	ECG at hypertensive disease, hypertensive crisis. Examination of patients	0.16	2			
23	Hypertensive crisis. Emergency and ICU care	0.16	2			
24	Acute lung diseases. Diagnosis, emergency care (pneumonia, pleurisy, atelectasis)	0.16	2			
25	Pneumonia. Current principles of treatment	0.16	2			

26	Bronchial asthma.Current principles of treatment	0.16	2			
27	Status asthmaticus. Emergency and ICU care	0.16	2			
28	Pulmonary edema. Emergency n And ICU care	0.16	2			
29	Chronic heart failure, clinical picture , emergency and ICU therapy	0.16	2			
30	Acute arterial hypotension	0.16	2			
31	Cardiogenic shock	0.16	2			
32	Algorithms of examination of patients with acute respiratory failure	0.16	2			
33	Treatment of patients with acute respiratory failure. Solution of situational tasks	0.16	2			
34	Emergency measures in ARF (tapping of pleural cavity, elimination of open pneumothorax).	0.16	2			
35	ALV methods	0.16	2			
36	Methods of secure upper airway	0.16	2			
37	Tracheal Direct and video intubation.	0.16	2			
38	Principles of emergency and intensive care for traumas of musculoskeletal system	0.16	2			
39	Traumas of musculoskeletal system, clinical picture, diagnostics	0.16	2			
40	Acute renal failure	0.16	2			
41	Traumatic shock. Pathogenesis. Clinical picture, diagnostics, treatment	0.16	2			
42	Spinal cord and vertebral spine injuries. Emergency and ICU care	0.16	2			
43	Local anesthesia in traumatology	0.16	2			
44	Concomitant, multiple and combined traumas	0.16	2			
45	Algorithm of emergency and ICU care for traumas	0.16	2			
46	Principles of infusion therapy in burns, frostbite and general hypothermia of the body	0.16	2			
	Block 2. Practical training	69.12	1983.6			46
	Block 3. Attestation	3	90			2
	TOTAL	76.8	2304			48
	Vacations			4	4	4
	Total	230.4	6912	52	52	52