MINISTRY OF HEALTH & EDUCATION OF KYRGYZ REPUBLIC
OSH STATE UNIVERSITY
INTERNATIONAL MEDICAL FACULTY

DEPARTMENT OF SURGICAL DISEASES & TRAUMATOLOGY

«ATTESTED»-
In meeting of Surgery department
Protocol.№___from_____2023.
*HOD.***Assoc.Prof.**
KURBANBAEV O.I. _____

«CONFIRMED»-

Chairman of SMC IMF
Assoc.Prof. *BAZIEVA A.M.*
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STUDENT TRAINING PROGRAM

(Syllabus)

For subject **« ANESTHESIOLOGY, RESUSCITATION AND INTENSIVE THERAPY»**

For specialist **-MEDICINE**

Study form **- morning**

course – IV
semester – VIII,
Сетка часов по учебному плану

discipline	Total hours					wos	Examinations
	Total 3 credits	Auditorial					
		Aud.	Lectures	Practical	lab.		
Anesthesiology, Resuscitation and intensive therapy	90	45	18	27	-	45	VIII
VIII	90	45	18	27	-	45	Exam

Form of study: full-time
Total credits: 3, course - 6, semester - 8.
Total labor intensity: 90 hours, including: classroom - 45 hours (lectures - 18 hours, practical - 27 hours); IWS - 45 hours.
The number of midterm controls (RC): module –1, exemptions –1 semester.
Information about the teacher: Ergeshbaev Meder Murzapayazovich-

Department, room number: "Surgical disciplines with a course of traumatology", clinic of the international medical faculty, 4th floor,412 office.

Contact information: working hours - 8.00.-17.00, mobile phone: 0700136001, 0551551414, email address: emmeder83@gmail.com

Date: 2022-2023 academic year

OSH-2023-2024

1. OBJECTIVES OF THE DISCIPLINE

The goals of course in ANESTHEZIOLOGY, RESUSCITATION INTENSIVE THERAPY are

- to provide student with a basic knowledge related to the subject of ARIT.

- Discipline resuscitation and intensive therapy is a clinical discipline and is designed to meet the challenges of primary assistance to the patient with acute pathology, staging pre-syndromic diagnosis of primary emergency care at the most common emergencies

2. LEARNING OUTCOMES OF THE DISCIPLINE

As a result of studying the course of anestheziology, resuscitation intensive therapy, students should:

Know:
At the end of MS course in ARIT, the student will be able to

- familiarize with the structure of anesthetic and intensive care services, key concepts and terminology in the specialty, the legal framework of the health care;
- examine the nosological forms of diseases related to the competence of the physician anesthetist - resuscitator;
- manage variants and methods of anesthesia in various fields of surgery;
- manage the basic approaches in the treatment of urgent and critical states.

Beable to:

- Able and willingness to identify critical conditions and syndromes diagnosis based on diagnostic studies;
- Able and willingness to analyze the patterns of functioning of individual organs and systems, to use the knowledge of anatomical and physiological basics, basic techniques of clinical and immunological examination and evaluation of the functional state of the organism of patients for timely diagnosis of vital functions and pathological processes leading to decompensation state, a critical state;
- Able and willingness to identify patients basic pathological symptoms and syndromes of critical conditions, using knowledge of the fundamentals of Biomedical and clinical disciplines, taking into account current laws pathology of organs, systems and organism as a whole, to analyze patterns of functioning of the organs and systems in critical conditions and pathological processes , use an algorithm of diagnosis (primary, collateral, complications), taking into account the International statistical classification of diseases and related health ; Able and willingness to perform basic medical measures at the most common diseases among the patients of a group of entities that can cause serious complications, and (or) death: diseases of the nervous, immune, cardiovascular, endocrine, respiratory, digestive, urogenital systems and blood; timely detection of life-threatening disorders, use methods of their immediate removal, carry out anti-shock event;
- Able and willingness to assign patients adequately treated in accordance with the diagnosis, exercise selection algorithm intensive medical and drug therapy for patients with infectious and non-communicable diseases, to carry out various types of anesthesia for various surgical interventions in patients with a variety of pathological conditions, concomitant pathology;

Own

- Conducting an initial examination of patients.
- Providing primary care.
- Withdrawal of patients from terminal states

3. Prerequisites: anatomy, physiology, histology, normal and pathological physiology, pathological anatomy, pharmacology, first aid, general patient care.

4. Post-requirements: surgery, traumatology, obstetrics and gynecology, oncology, therapy, endocrinology.

5. Technological map of the discipline(on the example of one semester)

Total	Ауд. часы	Self work	Module (90 h, 60 б.)				Total control (40 б.)				Итоговый балл
			Ауд. часы		sw	**1-рубежный контроль (РК1)**	lecture	practical.	selfwork	**Итоговый контроль (ИК)**	
			lecture	practical.							
90	27	27	18	27	27						
point			60	60	60	**60 б.**	40	40	40	**40 б**	
Виды контроля			**ТК**=(Лек+Прак+ +СРС)/3, **М**1=(ТК1+...+ТКN+ +**РК**1)/(N+1)				**ИК**=(Лек+Прак+ +СРС)/3, Экз=М1+М2+ИК				100

Note: Ауд. - classroom, ТК-current control, РК-boundary control, М-module, СРС- independent work of students, the ИК-total control.

6. Map of the accumulation of points in the discipline(for example, one module)

	ТК						**РК**	**Exam**
	lecture		**practical**		**selfwork**			
Topics	**ч**	**б**	**ч**	**б**	**ч**	**б**		
Topic-1	2	60	3	60	5	60		
Topic-2	2	60	3	60	5	60		
Topic-3	2	60	3	60	5	60		
Topic-4	2	60	3	60	5	60		
Topic -5	2	60	3	60	5	60		
Topic-6	2	60	3	60	5	60		
Topic-7	2	60	3	60	5	60		
Topic-8	2	60	3	60	5	60	**60б**	**40б**
Topic-9	2	60	3	60	5	60		
Total	**18**	60	27	60	45	60	**Total 60б**	**Total 100б**

Criteria for evaluating students..

lecture - 60 points

practice –60 points } **for 1 practical lesson.**

SW – 60 points

Type of lesson:	**Visit**	**discuss**	**concpekt**	**Oral Survey**	**Tests**	**Slides**		**referat**		**patient's history**	**Total**
						Оф.	**сод**	**Оф.**	**сод**		
lecture	**60**	**60**	**60**								**60**

practice	**5**	**15**	**10**	**20**	**10**						**60**
SW						**15**	**15**	**15**	**15**		**60**

7. Brief content of the discipline " anestheziology, resuscitation intensive therapy »

Topic # :1 Definitions of anesthesiology, resuscitation and intensive care.
History of the development of anesthesiology and resuscitation intensive care unit. Assessment of patients. Monitoring. Organization of intensive care unit. Facilities and equipment. Indications and contraindications for admission and transfer of patients in the intensive care unit..
Assessment of the patients are in the intensive care unit. Monitoring of vital body functions. Equipment and instruments in anesthesiology and resuscitation. Evaluation of anesthetic risk. The scales of the risk assessment. Premedication. Preparations for sedation, their properties and dosage, method of appointment. Correction of hemodynamic, respiratory, water-electrolyte and protein balance, acid-base balance, especially infusion-transfusion therapy and parenteral nutrition.
Topic: No. 2 Components of general anesthesia, theories of anesthesia, stage of anesthesia. Anesthetics, classification and characteristics. Types of anesthesia: General, conduction, local and their complications. The choice of anesthesia method. Indications and contraindications for general anesthesia. Inhaled anesthetics. Non-inhalation anesthetics. Combined methods of anesthesia. Selection method of general anesthesia and the anesthetic risk assessment.
Topic:No. 3 Methods of complex resuscitation and intensive therapy in terminal conditions. Classification. Cardiopulmonary resuscitation. Post-resuscitation illness.
Topic:No. 4 Methods of complex resuscitation measures and intensive therapy for acute respiratory distress. Acute respiratory failure (ARF). Pulmonary edema. Thromboembolism of the pulmonary arteries . Artificial lung ventilation (ALV). Pathophysiology and clinical manifestations of ARF. Methods for resuscitation and intensive therapy for ARF (partial tracheobronchial obstruction syndrome, respiratory biomechanics disorders, pathological conditions of lung of central origin, and so on. D.), At the hospital stage. The artificial lung ventilation (ALV), indications for, methods of carrying out, equipment. The changes in laboratory parameters in pulmonary function disorders Complications of mechanical ventilation, and their removal. Severe pneumonia. The pathophysiology, clinical manifestations, diagnosis, intensive therapy. Aspiration Syndrome. The pathophysiology, clinical manifestations, diagnosis, intensive care and resuscitation. Status asthmaticus. The pathophysiology, clinical manifestations, diagnosis, intensive therapy. ARDS syndrome. The pathophysiology, clinical manifestations, diagnosis, intensive care and resuscitation.
Topic:No. 5 Methods of complex resuscitation and intensive therapy in case of circulatory arrest. Heart rhythm disorders. Myocardial infarction. Acute heart failure. The pathophysiology, clinical manifestations, diagnosis, intensive care at the hospital stage. Acute vascular insufficiency. The pathophysiology, clinical manifestations, diagnosis, intensive care at the hospital stage. Cardiogenic shock. The pathophysiology, clinical manifestations, diagnosis, difdiagnostiki. Cardiogenic pulmonary edema. The pathophysiology, clinical manifestations, diagnosis, differential diagnosis. Arrhythmias (paroxysmal tachycardia, atrial fibrillation, arrhythmia, Morgagni-Edems-Stokes syndrome). The pathophysiology, clinical manifestations, diagnosis, differential diagnosis. Intensive Care and Emergency Medicine in complicated myocardial infarction (cardiogenic shock, pulmonary edema, cardiac arrhythmias) during hospital stay. Syncope, collapse. The pathophysiology, clinical manifestations, diagnosis, different diagnosis. Critical Care at the hospital stage.
Topic:No.6 Methods of complex resuscitation and intensive therapy for disorders of the central nervous system Methods of complex resuscitation and intensive care in traumatic brain injury. Disorders of cerebral circulation. Cerebral edema.

Topic:No. 7 Methods of complex resuscitation and intensive therapy for liver disorders. Acute liver failure. The changes in laboratory parameters in liver function disorders. Intensive therapy and resuscitation in acute liver failure at a hospital stage. Extracorporeal detoxification methods. Features Intensive Care and Emergency Medicine at acute liver failure on the hospital stage. Acute kidney failure. The pathophysiology of kidney failure. Intensive therapy and resuscitation in acute renal failure at a hospital stage. Extracorporeal detoxification methods. The pathophysiological mechanisms of development and the clinical picture of acute renal failure. The changes in laboratory parameters in liver function disorders. The main forms of acute renal failure. Features Intensive Care and Emergency Medicine at acute kidney failure on the hospital stage. Intensive therapy of endocrine disorders. Adrenal insufficiency. Thyrotoxic crisis. Glycemic profile disorders

Topic: No. 8 Methods of complex resuscitation and intensive therapy for severe injuries. Traumatic shock. Bleeding. Disseminated intravascular coagulation (DIC). Shock. The pathophysiology, clinical manifestations, diagnosis of hypovolemic shock. Hemorrhagic shock. Clinic, diagnostics and intensive care and resuscitation. Traumatic shock. Etiology, pathogenesis, clinical picture, diagnosis. Intensive therapy and resuscitation in traumatic and burn shock. Methods of complex resuscitation and intensive therapy in a coma (CSS)/ Critical Care at the comatose states on the hospital stage (hyper- and hypoglycemic coma, hyperosmolar coma, brain edema, convulsive and hyperthermal syndromes). Qualitative and quantitative assessment of impairment of consciousness. Stages of diagnosis. The etiology and pathogenesis of coma. Methods of diagnosis and initial examination of the patient in a coma. General principles for the correction of metabolic disorders in terminal states. Classification of terminal states. The pathophysiological changes in terminal state of clinical death. Clinical signs Diagnostics. Indications and contraindications to resuscitation. Methods of cardiopulmonary resuscitation at the hospital stage. Cardiac massage. Drug therapy. Cardioversion. Methods of monitoring the state of vital organs and systems of the body during resuscitation. Postresuscitative disease. Keeping the patient in the early postresuscitative. Possible complications and their prevention and treatment. Clinical signs indicating the occurrence of "brain death." Ethical, social and legal problems associated with the termination of resuscitation. Infusion and transfusion therapy. parenteral nutrition

Topic: No. 9. Asphyxia. The pathophysiology, clinical manifestations, diagnosis, intensive care and resuscitation. Drowning. Pathophysiology, clinic, intensive care and resuscitation. Electrocution. The pathophysiology, clinical manifestations, diagnosis, intensive care and resuscitation. Heat stroke (hyperthermic coma). The pathophysiology, clinical manifestations, diagnosis, intensive care and resuscitation. Bites of poisonous snakes and insects. The pathophysiology, clinical features, especially emergency care

8. THEMATIC PLAN FOR THE DISTRIBUTION OF HOURS BY TYPE OF ACTIVITY

Calendar and thematic plan of lectures
for students majoring in 560001-Medical Science (GM)
(7th semester, 2022-2023 academic year.)

№ week	№ lessons	Name of sections, modules, and topics	Number of hours	
Work programm	1.	Definition of anesthesiology, resuscitation and intensive care. Components of general anesthesia, theory of anesthesia, stage of anesthesia. Equipment and instruments in anesthesiology and resuscitation.	2 h.	18 hours
	2.	Anesthetics, classification and characteristics. Types of anesthesia: General, conduction, local and their complications.	2 h.	
	3.	Fundamentals of cardiopulmonary resuscitation. Acute cardiovascular failure.	2 h.	

		Terminal stage and classification.		
	4.	Acute respiratory failure	2 h.	
	5.	Methods of complex resuscitation and intensive therapy in case of circulatory arrest. Heart rhythm disorders. Myocardial infarction. Acute heart failure	2 h.	
	6	Resuscitation measures for traumatic brain injury. Violation of cerebral circulation. Cerebral edema.		
	7	Acute liver failure. Acute renal failure. Intensive therapy of endocrine disorders	2 h.	
	8	Shock, concept, classification, clinic and intensive care	2 h.	
	9.	Acute poisoning of various etiologies. Bite, electrical injury, sunstroke, frostbite, drowning, hanging.	2 h.	
	Module *: « Anesthesiology, resuscitation and intensive therapy »*		2 h..	

Calendar and thematic plan of practical classes
for students majoring in 560001-Medical Science (GM)
(9th semester, 2022-2023 academic year.)

№ week		№ lessons	**Name of sections, modules, and topics**	**Number of hours**
1week	22/01-27/01	1.	Definitions of anesthesiology, resuscitation and intensive care. History of the development of anesthesiology and resuscitation. Equipment and instruments in anesthesiology and resuscitation.	3 hours
2week	29/01-03/02	2.	Components of general anesthesia, theories of anesthesia, stage of anesthesia. Anesthetics, classification and characteristics. Types of anesthesia: General, conduction, local and their complications.	3 hours
3week	05/02-10/02	3.	Methods of complex resuscitation and intensive therapy in terminal conditions. Classification. Cardiopulmonary resuscitation. Post-resuscitation illness.	3 hours

4week	12/02_17/02	4.	Methods of complex resuscitation measures and intensive therapy for acute respiratory distress. Acute respiratory failure (ARF). Pulmonary edema. Thromboembolism of the pulmonary arteries. Artificial lung ventilation.	3 hours
5week	19/02_24/02	5.	Methods of complex resuscitation and intensive therapy in case of circulatory arrest. Heart rhythm disorders. Myocardial infarction. Cardiogenic shock.	3 hours
6week	26/02_02/03	6.	Methods of complex resuscitation and intensive therapy for disorders of the central nervous system Methods of complex resuscitation and intensive care in traumatic brain injury. Cerebral disorders. Cerebral edema.	3 hours
7week	04/03_09/03	7.	Methods of complex resuscitation and intensive therapy for liver disorders and for kidney disorders. Acute liver failure. Acute renal failure. hemodialysis. Intensive therapy of endocrine disorders	3 hours
8week	11/03_16/03	8.	Methods of complex resuscitation and intensive therapy for severe injuries. Traumatic shock. Bleeding. Disseminated intravascular coagulation. Infusion and transfusion therapy. parenteral nutrition	3 hours
9week	18/03_23/03	9.	Methods of complex resuscitation and intensive therapy for poisoning of various etiologies, for electrical injury, sunstroke, frostbite, drowning, speech.	3 hours
			1ST MODULE: « Anesthesiology, resuscitation and intensive therapy »	**2 ч.**
Total hours		Lecture classes		18 hours
		Practical exercises		27 hours
		Modules		2 hours

9. EDUCATIONAL AND METHODOLOGICAL SUPPORT OF THE COURSE

наименование	**автор**	**год выпуска**	**адрес**

Practical Trends in Anesthesia and Intensive Care	/ David Andersson	2022	https://books.google.com/books
2. Textbook of Anaesthesia And AnalgesiaPart II & III : Anaesthetic Management, Recent Trends and Sub Specialities	Pramod kumar	2018	https://ibooks.oshsu.kg/book/?lg=1&id_parent=376&id1=1884&id4=2.2.81.1#books01918
AnesthesiologyA Problem-Based Learning Approach	Tracey Straker, Shobana Rajan, Magdalena Anitescu	2018	https://ibooks.oshsu.kg/book/?lg=1&id_parent=376&id1=1883&id4=2.2.81.1#books01919
4. Anesthesiology and resuscitation	LAP LAMBERT Academic Publishing	2020	https://ibooks.oshsu.kg/book/?lg=1&id_parent=376&id1=1886&id4=2.2.81.1#books01921
Clinical Anesthesia Near Misses and Lessons Learned	John G. Brock-Utne, MD, PhD, FFA(SA) Professor of Anesthesia, Stanford University Medical Center, Stanford, California, USA	2018	https://ibooks.oshsu.kg/book/?lg=1&id_parent=376&id1=285&id4=#books00282

Software and Internet resources:

1.MedLine – http:// www.medline – catalog.ru
2.ScientificNefworh - http://nature.web.ru
3. Медицински книги - http://www.medicbooks.info

10. INFORMATION ON THE ASSESSMENT (TABLE POINTS)

100 бальная система	30 бальная система	Оценка по буквенной системе	Цифровой эквивалент оценки	Оценка по традиционной системе
87 – 100	**26 – 30**	A	4,0	Great
80 – 86	**24 – 25**	B	3,33	Well
74 – 79	**22 – 23**	C	3,0	
68 -73	**20 – 21**	Д	2,33	Satisfactory
61 – 67	**18 – 19**	E	2,0	
31-60	**9 – 17**	FX	0	Unsatisfactory
0-30	**0 – 8**	X	0	

11. SCORING POLICY

In accordance with the points accumulation card, the student can receive points for all types of classes. At lectures, in practical classes, and for performing the SRS. At the same time, for the current and boundary controls-a maximum of 60 points for 1 module; the final control – a maximum of 40.

12. COURSE POLICY

The policy of the discipline is aimed at the most complete mastering of the educational material by students and the fruitful cooperation of teachers and students

Students are required to:
- Fully master the knowledge, skills and practical skills;
- Respectfully and correctly treat teachers, employees and students;
- Students should be disciplined and neat, behave with dignity at the University, in hospitals.
- With the beginning of classes in all educational and adjacent premises must be provided with the silence and order necessary for the normal course of training sessions;
- Students are allowed to enter the classroom and leave the classroom after the start of classes (the actual start of classes by the teacher) only with the permission of the teacher;
- Be sure to attend lectures, practical (seminar, laboratory) classes, classes on SRSP;
- Attend practical (seminar, laboratory) classes, exams in medical form;
- Have health records at clinical departments with admission from the SES.
- Take care of the property of the department;
- Comply with fire safety regulations
- Comply with the academy's internal regulations
- Actively participate in the life of the department (work in the SSS circle, events of the department, etc.).
- Turn off mobile phones during lectures, classes; it is forbidden to take cell phones for exams.
- Attending lectures is mandatory. In case of missing lectures, the material is worked out in the form of preparing a lecture summary and an interview with the lecturer.
- Working out at departments and courses should be carried out outside of school hours – on Saturdays, in the clinic-it is allowed to conduct working out during the night duty of the teaching staff.
- The student is obliged to work out the lesson in the number of missed hours according to the program.
- In case of missing classes by students for a valid reason (being on inpatient treatment, the occurrence of emergency events: natural disasters, accidents, etc.), the student or his relatives are obliged to inform the department about the incident in any way (by phone, etc.) within a day with the provision of documents confirming this circumstance. The exculpatory documents are: a certificate from the student polyclinic, a certificate of the death of loved ones, a donor certificate, a marriage certificate, a child's birth certificate. In the absence of supporting documents, the reason is considered disrespectful.

13. LIST OF QUESTIONS AND TASKS ON TOPICS AND FORMS OF CONTROL

Questions of final control

1. 1Definitions of anesthesiology, resuscitation and intensive care.

2. History of the development of anesthesiology and resuscitation
3. Organization intensive care unit. Facilities and equipment. Mode of operation. Indications and contraindications for admission and transfer of patients in the intensive care unit.

4. 2resuscitation doctor with other doctors and relatives of patients. Assessment of the patients are in the intensive care unit. Monitoring of vital body functions.
5. Components of general anesthesia, theories of anesthesia, stage of anesthesia. Equipment and instruments in anesthesiology and resuscitation
6. The choice of anesthesia method.
7. Indications and contraindications for general anesthesia.
8. Evaluation of anesthetic risk. The scales of the risk assessment. Value for GP premedication. Preparations for sedation, their properties and dosage, method of appointment.
9. Acute respiratory failure (ARF). Pathophysiology of ARF. Reanimation and intensive care at the hospital stage
10. Aspiration syndrome. The pathophysiology, clinical manifestations, diagnosis, intensive care and resuscitation .
11. Status asthmaticus. The pathophysiology, clinical manifestations, diagnosis, intensive therapy.
12. syndrome ARDS. The pathophysiology, clinical manifestations, diagnosis, intensive care and resuscitation.
13. Acute heart failure (PRAs). Pathophysiology, critical care at the hospital stage
14. Acute heart failure. The pathophysiology, clinical manifestations, diagnosis, intensive therapy.
15. Acute vascular insufficiency. The pathophysiology, clinical manifestations, diagnosis, intensive therapy.
16. Cardiogenic shock. The pathophysiology, clinical manifestations, diagnosis, intensive therapy.
17. cardiogenic pulmonary edema. The pathophysiology, clinical manifestations, diagnosis, differential. diagnostics.
18. Cardiac arrhythmias (paroxysmal tachycardia, atrial fibrillation, arrhythmia, Morgagni-Edems-Stokes syndrome). The pathophysiology, clinical manifestations, diagnosis, differential. diagnostics.
19. Critical Care in complicated myocardial infarction (cardiogenic shock, pulmonary edema, cardiac arrhythmias) during hospital stay. countershock
20. Syncope, collapse. The pathophysiology, clinical manifestations, diagnosis, differential diagnostics. Critical Care at the hospital stage.
21. Complex methods of intensive therapy in clinical death and terminal conditions at the hospital stage.
22. . Clinical signs Diagnostics. Methods of cardiopulmonary resuscitation. Drug therapy. Methods of monitoring the state of vital organs and systems of the body during resuscitation.
23. Acute liver and kidney failure. The pathophysiology of liver and kidney failure. Intensive therapy and resuscitation in acute liver and renal failure at a hospital stage. Extracorporeal detoxification methods.
24. The pathophysiological mechanisms of development and the clinical picture of acute renal failure. The main forms of acute renal failure.
25. Features of critical care at the hospital with acute renal failure stage.
26. Critical Care at the comatose states on the hospital stage (hyper- and hypoglycemic coma, hyperosmolar coma, brain edema, convulsive and hyperthermal syndromes).
27. Coma. classification. The pathophysiology, clinical manifestations, diagnosis, differential. diagnostics
28. 5.Metods diagnosis and initial examination of the patient in a coma.
29. 6.Intensivnuyu therapy and resuscitation with hypo and hyperglycemic koma.
30. cerebral edema, convulsions and hyperthermal syndrome. Etiology, clinic, diagnostics, intensive care and resuscitation.

31. resuscitation and intensive therapy at a shock of various etiologies at the hospital stage.
32. Shock - definition, classification. pathophysiology, clinical hypovolemic shock. 3. Hemorrhagic shock. Clinic, diagnostics and intensive care and resuscitation.
33. Traumatic shock and Burn shock. Etiology, pathogenesis, clinical picture, diagnosis. Intensive therapy and resuscitation in traumatic and burn shock.
34. 6.Anafilaktical shock. Etiology, pathogenesis, clinical manifestations, diagnosis, intensive care and resuscitation.
35. septic shock. Etiology, pathogenesis, clinical manifestations, diagnosis, intensive care and resuscitation in septic shock.
36. Resuscitation and intensive care in case of accidents at the hospital stage
37. Asphyxia. The pathophysiology, clinical manifestations, diagnosis, intensive care and resuscitation.
38. Drowning. Pathophysiology, clinic, intensive care and resuscitation.
39. Electrical injury. The pathophysiology, clinical manifestations, diagnosis, intensive care Heat stroke (hyperthermic coma). The pathophysiology, clinical manifestations, diagnosis, intensive care and resuscitation.
40. bites of poisonous snakes and insects. The pathophysiology, clinical features, especially emergency care.
41. General principles of intensive care and resuscitation in acute exogenous intoxication at the hospital stage. Features of critical care at different acute poisoning.
42. Subject and tasks of clinical toxicology.
43. Routes of distribution and transformation of the poison in the body. Methods of removing the poison from the body.
44. The general principles of treatment of acute exogenous intoxication at the hospital stage.
45. The pathophysiological features of development, clinical diagnostics and toxic com caused by alcohol, narcotic drugs and psychotropic drugs.
46. Features of emergency aid in the development of toxic com, caused by the use of drugs cauterants.
47. Critical Care with mushroom poisoning