

**INTERNATIONAL HIGHER SCHOOL OF MEDICINE**

**Department of Surgical diseases**

**SYLLABUS**

**General surgery**

2025-2026 academic year

for students of medical faculty


2 course 3 semester, groups 1-40

2 credits (60 h, including auditorial 36 h, independent work – 24 h)

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**Venue:** National Hospital I.K. Akhunbaev clinic, Togolok Moldo str. 1/13,  
Department of Surgical diseases

The Syllabus is considered  
at the meeting of the department of surgical diseases  
Protocol №4 dated 15th December 2025  
Head of the department  Ermekov T.A.

**Course Objective:** formation of competences of foreign students in the specialty «General surgery», study of theoretical foundations and practical skills of propedeutic surgery, training of a specialist for primary examination of a surgical patient, rendering first aid as part of the duties of the doctor specialty «General Medicine» with the English language of instruction.

After study of the discipline the student must:

**Knowledge:**

- A medical history diagram that determines the sequence of examining the patient using physical, clinical, laboratory, functional and instrumental methods;
- goals and objectives, principles and methods of conducting aseptic and antiseptic surgery;
- a set of methods and methods of work aimed at preventing infection in the wound, the patient's body, creating microbial, sterile conditions for surgery;
- a system of measures aimed at the destruction of microorganisms in the wound, pathological hearth, organs and tissues, as well as in the body of the patient as a whole;
- patterns of functional of individual organs and systems, mechanisms of development of the main symptoms and syndromes, as well as methods for their identification

**Skill:**

- Collect the necessary information, carefully and competently describe all sections of the «students» medical history, recording all necessary data, reflecting the course of clinical thinking in the process of making a diagnosis and choosing treatment tactics;
- Choose and apply different methods of aseptic and antiseptic, according to the goals and objectives of the profession;
- Identify the main symptoms using physical examination methods and group them into syndromes based on knowledge of the anatomical and physiological characteristics and patterns of functioning of organs and systems

**Attitude:**

- Demonstrate practical skills in collecting patient complaints, his medical history, conducting a physical examination in accordance with the medical history chart at the patients bedside;
- Skill in determining the purpose of medical products, their scope of application and the algorithm for their use in the provision of medical care
- Skills of physical examination of patients aimed at identifying the main pathological symptoms for the purpose of reliable diagnosis o diseases

**Pre-requisites.**

- Anatomy (macro-microanatomy)
- Latin
- Normal Physiology
- Microbiology, virology and immunology

**Post-requisites.**

- Therapeutic disciplines
- Obstetric-gynecological disciplines
- Surgical disciplines
- Pediatric disciplines
- Traumatological disciplines
- Anesthesiology and resuscitation disciplines

**THEMATIC PLAN OF LECTURES**

<b>№</b>	<b>Theme of lecture</b>	<b>Hours</b>	<b>Date</b>
1	Introductory lecture. Acquaintance with the department. History of surgery. Organization of surgical assistance.	2	04.09.2023-11.09.2023
2	Asepsis.	2	18.09.2023-25.09.2023
3	Modern antiseptic.	2	02.10.2023-09.10.2023
4.	Desmurgy	2	16.10.2023-23.10.2023
5	Bleeding. Hemostasis.	2	30.10.2023-06.11.2023
6	Transfusion of blood and its components	2	13.11.2023-20.11.2023
7	Blood replacement fluids	2	27.11.2023-04.12.2023
8	Surgical operations (types, incisions, stages)	2	11.12.2023-18.12.2023
9	Clinical examination of surgical patients	2	25.12.2023
	<b>Total hours:</b>	<b>18</b>	

**THEMATIC PLAN OF PRACTICAL CLASSES**

<b>№</b>	<b>Theme of practical class</b>	<b>Hours</b>	<b>Date</b>
1.	Introductory lecture. Acquaintance with the department. History of surgery. Organization of surgical assistance.	2	04.09.2023-11.09.2023
2.	Aseptic. Modern antiseptic.	2	18.09.2023-25.09.2023
3.	Desmurgy	2	02.10.2023-09.10.2023
4.	Module №1	2	16.10.2023-23.10.2023
5.	Bleeding. Hemostasis. Blood transfusion.	2	30.10.2023-06.11.2023
6.	Blood replacement fluids	2	13.11.2023-20.11.2023
7.	Surgical operations (types, incisions, stages)	2	27.11.2023-04.12.2023
8.	Clinical examination of surgical patients	2	11.12.2023-18.12.2023
9.	Module №2	2	25.12.2023
	<b>Total hours:</b>	<b>18</b>	

**THEMATIC PLAN OF INDEPENDENT WORK OF STUDENTS**

<b>Unit №</b>	<b>Theme of independent work</b>	<b>Hours</b>	<b>Date</b>
<b>Unit №1 General Surgery (Desmurgy. Aseptic. Modern antiseptic) 18hrs</b>			
1.	Search and review of literature sources of information on individually specified course objectives	4	04.09.2023-11.09.2023
2.	Writing an essay, report, scientific article on a given problem	4	18.09.2023-25.09.2023
3.	Supervision of patients solving situational problems and test tasks	2	02.10.2023-09.10.2023
4.	Preparation for tests and colloquium	4	16.10.2023-23.10.2023
5.	Preparation for the exam	4	30.10.2023-06.11.2023
6.	Search and review of literature sources of information on individually specified course objectives	4	13.11.2023-20.11.2023

7.	Writing an essay, report, scientific article on a given problem	4	27.11.2023-04.12.2023
8.	Supervision of patients solving situational problems and test tasks	2	11.12.2023
9.	Preparation for tests and colloquium	4	18.12.2023
10.	Preparation for the exam	4	25.12.2023
<b>Total</b>		<b>36</b>	

Recommended reading for the discipline:

**Basic:**

1. «Bailey and love short practice of surgery Vol.1-25thed» Williams N.S. 2008
2. «Manipal manual of surgery» Shenov K.R. 2007

**Additional:**

1. «Atlas Of Surgical operations» Chyngyshpaev Sh.M. 2016

**Grading policy and procedures for all types of work**

For the period of studying the discipline, the student gains points for the relevant parameters (per unit):

current score - 40 points

independent work - 20 points

control score (final assessment of knowledge per unit) - 40 points

Maximum score - 100 (40+20+40)

**Grading system for student's achievements**

Grading criteria per discipline				
Maximum score	Intervals			
	«unsatisfactory»	«satisfactory»	«good»	«excellent»
Current control - 40	0-23	24-30	31-35	36-40
Interval description	Exposed for poor learning. The unsatisfactory answer shows that the student is familiar with the educational material, but does not distinguish the basic provisions that make material mistakes that distort the meaning of the studied. It conveys the information that he remembered with words of a teacher or from a textbook, but which logically is not processed in his mind, not brought into the system of scientific provisions, arguments.	Displayed if student applies correctly specific terminology, knows the basic, essential provisions of the training material, but does not know how to explain them, allows individual errors and inaccuracies in the content of knowledge and the form of construction of the answer.	It is put forward for the correct assimilation of the software material, but there are inaccuracies and minor errors, both in the content and in the form of the answer.	It is for a deep understanding of the educational material, for the ability to independently explain the studied provisions, for a logical correctly constructed answer, when the student does not tolerate mistakes and is able to integrate the acquired knowledge with knowledge on related academic disciplines.
Independent work - 20	0-11	12-15	16-17	18-20
Interval description	It is displayed if the student does not complete the task, makes gross mistakes when answering the teacher's questions, there are no ready-made schemes, tables.	It is displayed if the student is difficult to answer, makes mistakes and inaccuracies.	It is put forward for the correct assimilation of the software material, but there are inaccuracies and minor errors, both in	It is for a deep understanding of the educational material, for the ability to independently explain the studied provisions, for a logical correctly constructed answer,

			the content and in the form of the answer.	when the student does not tolerate mistakes and is able to integrate the acquired knowledge with knowledge on related academic disciplines.
Control work (module) - 40	0-23	24-30	31-35	36-40
Interval description	Significant gaps in knowledge of the main training material were identified, fundamental mistakes were made in answering questions	Knowledge of the educational material to the extent necessary for further development of the discipline, familiarity with the basic literature recommended for the class. The student makes mistakes, but has the necessary knowledge to correct them under the guidance of the teacher.	Full knowledge of educational material, basic literature recommended for the class. The student manifests the systemic nature of knowledge in the discipline and is able to supplement and update himself in the course of further study work and professional activity.	Comprehensive, systematic and in-depth knowledge of educational material, basic and additional literature, interrelation of basic concepts of discipline in their importance for the acquired profession.

**Conduct Policy: (lateness, absence, behavior in the auditorium, late submission of work).**

- Punctuality and completion of tasks.
- Mandatory attendance of classes.
- Attending class in a clean medical uniform.
- Eliminating conversations on a cell phone in the classroom.
- Active participation in the learning process.
- Doing homework on time.
- Academic detention at the time specified by the teacher.

For violations of the Conduct Policy, the total points for discipline might be reduced to 1-10 points.

**Academic Ethics Policy.**

- Be tolerant, respect the opinions of others.
- Formulate objections in the correct form.
- Constructively support feedback in all classes.
- Plagiarism and other forms of dishonest work are unacceptable. Plagiarism includes the following: the absence of references when using printed and electronic materials, quotes, thoughts and works of other authors or students.
- Prompting and cheating during tests, exams, classes is unacceptable as well as passing an exam for another student, unauthorized copying of materials.

For violations of the Academic Ethics Policy, the total points for the discipline may be reduced to 1-10 points.

**Guidelines for the lessons of the discipline**

**UNIT №1 «General Surgery»**

**Content of Unit № 1**

**Class 1**

**Key questions covered in Lecture №1: Introductory lecture. Acquaintance with the department. History of surgery. Organization of surgical assistance.**

1. Surgery. History of surgery.
2. History of surgery of Ancient World
3. History of surgery of XIX-XX century

**Key questions covered in Practice classes №1: Introductory lecture. Acquaintance with the department. History of surgery. Organization of surgical assistance.**

1. History of surgery of Ancient World

2. History of surgery of Ancient Egypt, Ancient India, Ancient Greece, Ancient China, Ancient Rome.
3. History of surgery of Ancient Greece. Hippocrate.
4. History of surgery Ancient Rome. Celsus. Galen.
5. History of surgery of Arab world. Abu Ali ibn Sina. Avicenna.
6. Paracelsus and A. Pare.
7. History of surgery of XIX-XX century.

**Recommended reading for the class:**

[4] PP 6-16

**Class 2**

**Key questions covered in Lecture №2: Desmurgy.**

1. Definition of desmurgy
2. Classification of Desmurgy.
3. Types of bandages:

**Key questions covered in Practice classes №2: Desmurgy.**

1. Definition of desmurgy
2. Classification of Desmurgy.
3. Fixed bandages.
4. Soft bandages.
5. Type of bandages.
6. Bandages for head.
7. Bandages for foot.
8. Bandages for hand.

**Recommended reading for the class**

[4] PP 231-241

**Class 3. Key questions covered in Lecture №3: Aseptic. Modern antiseptic.**

1. Definition of asepsis and antiseptis
2. History of asepsis and antiseptis.
3. Sources and ways of spread of infection in surgery.
4. Classification of aseptic.
5. Classification of antiseptic.

**Key questions covered in Practice classes №3: Aseptic. Modern antiseptic.**

1. History of asepsis and antiseptis.
2. Sources and ways of spread of infection in surgery.
3. Exogenous infection.
4. Endogenous infection
5. Asepsis. Classification.
6. Chemical methods of asepsis.
7. Physical methods of asepsis.
8. Problems of HIV infection in surgery.
9. Antiseptis. Classification.
10. Mechanical methods of antiseptis.
11. Physical methods of antiseptis.
12. Chemical methods of antiseptis.
13. Biological methods of antiseptis.

**Recommended reading for the class**

[4] PP 21-60

**Key questions covered in Lecture classes №4: Bleeding. Hemostasis. Blood transfusion.**

1. Definition of bleeding.
2. Classification of bleeding.
3. Hemostasis.
4. Methods of stopping of bleeding.
5. Blood transfusion. Methods of blood transfusion.
6. Blood components

**Key questions covered in Practice classes №4: Bleeding. Hemostasis. Blood transfusion.**

1. Bleeding. Classification.
2. Mechanical damage to blood vessels. Arrosive bleeding.
3. Type of bleeding. Arterial. Venous. Capillar.
4. Internal and external bleeding.
5. Severity of blood loss. Classification of the American College of Surgeons.
6. Hemotorax.
7. Hemoperinoteum.
8. Hoemostasis.
9. Methods of temporarily stopping of bleeding.
10. Methods of final stopping of bleeding.
11. Blood transfusion. Methods of blood transfusion.
12. Blood components.

13. Blood groups. Rh-factor.

14. Complication of blood transfusions.

**Recommended reading for the class**

[4] PP 105-164

**UNIT 2**

**Key questions covered in Lecture classes №1: Surgical Deontology. Examination of surgical patients.**

1. Surgical deontology.
2. Examination of surgical patients.

**Key questions covered in Practice classes №1: Surgical Deontology. Examination of surgical patients.**

1. Surgical Deontology.
2. Examination of surgical patients.
3. Palpation.
4. Percussion.
5. Auscultation.

**Recommended reading for the class**

[4] PP 105-164

**Key questions covered in Lecture classes №2: Medical history of a surgical patient.**

1. Medical history of surgical patients.

**Key questions covered in Practice classes №2: Medical history of a surgical patient.**

1. Medical history of a surgical patient. the main stages of examination of the patient.
2. passport part
3. complaints.
4. Anamnes morbi
5. Anamnes vitae
6. objective examination of the patient
7. diagnosis

**Recommended reading for the class**

[4] PP 175-205

**Key questions covered in Lecture classes №3: Pre-operative period. Surgical operations (types, accesses, stages). Postoperative period**

1. Preoperative preparation.
2. Operative period.
3. Postoperative period.

**Key questions covered in Practice classes №2: Pre-operative period. Surgical operations (types, accesses, stages). Postoperative period**

1. purpose and objectives of pre-operational preparation
2. absolute indication for operation.
3. relative indication for operation.
4. absolute contraindication for operation.
5. relative contraindication for operation.
6. Surgery. Type of surgery.
7. Antibiotic prophylactics.
8. Postoperative period.
9. Catabolic phase.
10. Regression phase.
11. Anabolic phase.
12. Patient monitoring.
13. Complications. Early and late complications

**Recommended reading for the class**

[4] PP 175-205

**UNIT №3«Basis of clinical surgery»**

**Content of Unit № 3**

**Class 1**

**Key questions covered in Lecture №1: Wound and wound infection (2 hrs.)**

1. Definition of wounds
2. Classification of wounds
3. Clinical manifestation
4. Complications of wounds
5. Healing of the wound
6. Wound healing phases
7. Factors affecting wound healing
8. First aid
9. Treatment of clean and purulent wounds

**Class 2**

**Key questions covered in Practice class №1: Wound and wound infection (2 hrs)**

1. Definition, clinical manifestation, classification of wounds

2. Early primary surgical treatment of wounds and how it performed
3. Primary surgical debridement of wounds
4. Late surgical treatment of wounds
5. Difference between secondary and primary surgical wounds treatment
6. Forms of sutures, indications to their imposition.
7. Methods of treating purulent wounds.

**Recommended reading for the class**

[4] PP 7-24

**Class 3**

**Key questions covered in Lecture №2: Acute suppurative disease of soft tissues (2 hrs)**

1. Acute suppurative disease of soft tissues definition
2. Phlegmon
3. Furuncle
4. Carbuncle
5. Hydroadenitis
6. Erysipiles
7. Lymphangitis
8. Lymphadenitis
9. Acute Mastitis

**Class 4**

**Key questions covered in Practice class №2: Acute suppurative disease of soft tissues (2 hrs)**

1. Acute suppurative disease of soft tissues definition, clinical manifestation, principles of treatment
2. Phlegmon surgical treatment
3. Furuncle surgical treatment
4. Carbuncle surgical treatment
5. Hydroadenitis surgical treatment
6. Erysipiles surgical treatment
7. Lymphangitis surgical treatment
8. Lymphadenitis surgical treatment
9. Acute Mastitis surgical treatment

**Recommended reading for the class**

[4] PP 150-159

**Class 5**

**Key questions covered in Lecture №3: Acute suppurative disease of bones and Joints (2 hrs)**

1. Acute suppurative disease of soft tissues definition, clinical manifestation, principles of treatment
2. Osteomyelitis definition classification
3. Acute haematogenic osteomyelitis
4. Brodies's abscess, Garre's disease
5. Posttraumatic osteomyelitis
6. Acute suppurative arthritis

**Class 6**

**Key questions covered in practice class №3: Acute suppurative disease of bones and Joints (2hrs)**

1. Acute suppurative disease of soft tissues definition, clinical manifestation, principles of treatment
2. Osteomyelitis definition classification
3. Acute haematogenic osteomyelitis, clinical manifestation, treatment
4. Brodies's abscess, Garre's disease osteomyelitis, clinical manifestation, treatment
5. Posttraumatic osteomyelitis osteomyelitis, clinical manifestation, treatment
6. Acute suppurative arthritis osteomyelitis, clinical manifestation, treatment

**Recommended reading for the class**

[4] PP 164-175

**Class 7**

**Key questions covered in Lecture №4: Anaerobic specific surgical infection (2 hrs)**

1. Anaerobic specific surgical infection definition, classification
2. Tetanus, epidemiology, pathogenesis, clinical manifestation, treatment
3. Gas gangrene epidemiology, pathogenesis, clinical manifestation, treatment
4. Principles of treatment and complications
5. Prevention

**Class 8**

**Key questions covered in practice class №4 Anaerobic specific surgical infection (2 hrs)**

1. Anaerobic specific surgical infection definition, classification
2. Tetanus, epidemiology, pathogenesis, clinical manifestation, treatment
3. Gas gangrene epidemiology, pathogenesis, clinical manifestation, treatment
4. Principles of treatment and complications
5. Surgical treatment
6. Prevention

**Recommended reading for the class**

**Class 9**

**Key questions covered in Lecture №5: Necrosis, trophic ulcers, gangrene (2 hrs)**

- 1.Necrosis definition, classification, clinical manifestation
- 2.Gangrene and varicose ulcers
- 3.Arterial occlusion
- 4.Obliterating endarteritis
- 5.Endarteritis obliterans
- 6.Amputations

**Key questions covered in practice class №4 Necrosis, trophic ulcers, gangrene (2 hrs)**

- 1.Necrosis definition, classification, clinical manifestation
- 2.Gangrene and varicose ulcers clinical manifestation, diagnosis
- 3.Arterial occlusion diagnosis, treatment
- 4.Obliterating endarteritis diagnosis, treatment
- 5.Endarteritis obliterans diagnosis, treatment
- 6.Amputations

**Recommended reading for the class**

[4] PP 196-205

**Key questions covered in Practice classes.№ 5: Module №3 (2 hrs)**

1. Definition, clinical manifestation, classification of wounds
2. Early primary surgical treatment of wounds and how it performed
3. Primary surgical debridement of wounds
4. Late surgical treatment of wounds
5. Difference between secondary and primary surgical wounds treatment
6. Forms of sutures, indications to their imposition.
7. Methods of treating purulent wounds
- 8.Acute suppurative disease of soft tissues definition, clinical manifestation, principles of treatment
9. Phlegmon surgical treatment
10. Furuncle surgical treatment
- 11.Carbuncle surgical treatment
- 12.Hydroadenitis surgical treatment
- 13.Erysipiles surgical treatment
14. Lymphangitis surgical treatment
- 15.Lymphadenitis surgical treatment
- 16.Acute Mastitis surgical treatment
- 17.Acute suppurative disease of soft tissues definition, clinical manifestation, principles of treatment
- 18.Osteomyelitis definition classification
- 19.Acute haematogenic osteomyelitis, clinical manifestation, treatment
- 20.Brodies's abscess, Garre's disease osteomyelitis, clinical manifestation, treatment
- 21.Postramatic osteomyelitis osteomyelitis, clinical manifestation, treatment
22. Acute suppurative arthritis osteomyelitis, clinical manifestation, treatment
- 23.Anaerobic specific surgical infection definition, classification
- 24Tetanus, epidemiology, pathogenesis, clinical manifestation, treatment
- 26.Gas gangrene epidemiology, pathogenesis, clinical manifestation, treatment
- 27.Principles of treatment and complications
- 28.Necrosis definition, classification, clinical manifestation
- 29.Gangrene and varicose ulcers clinical manifestation, diagnosis
- 30.Arterial occlusion diagnosis, treatment
- 31.Obliterating endarteritis diagnosis, treatment
- 32.Endarteritis obliterans diagnosis, treatment
- 33.Amputations

**Guidelines for the lessons of the discipline**

**UNIT №4«Basis anesthesiology and reanimation»**

**Content of Unit № 4**

**Class 1**

**Key questions covered in Lecture №1: Pain syndrome, anesthesia (2 hrs.)**

- 1.Defination of pain syndrome, pathogenesis
- 2.Local anesthesia
- 3.Infiltration anesthesia
- 4.Block anesthesia
- 5.Intravenous anesthesia
- 6.Spinal and peridural anesthesia
- 7.General inhalation anesthesia
- 8.General intravenous anesthesia, endotracheal anesthesia

**Class 2**

**Key questions covered in Practice class №1: Pain syndrome, anesthesia (2 hrs)**

- 1.Defination of pain syndrome, pathogenesis

2. Local anesthesia, indications, contraindications, complication, performance
3. Infiltration anesthesia indications, contraindications, complication, performance
4. Block anesthesia indications, contraindications, complication, performance
5. Intravenous anesthesia indications, contraindications, complication, performance
6. Spinal and peridural anesthesia indications, contraindications, complication, performance
7. General inhalation anesthesia indications, contraindications, complication, performance
8. General intravenous anesthesia, endotracheal anesthesia indications, contraindications, complication, performance

**Recommended reading for the class**

[4] PP 24-39

**Class 3**

**Key questions covered in Lecture №2: Cardiopulmonary resuscitation (2 hrs)**

1. Cardiopulmonary resuscitation definition
2. Steps of cardiopulmonary resuscitation
3. Emergency aid in accidents
4. Traumatic shock, drowning, electric shock,

**Class 4**

**Key questions covered in Practice class №2: Cardiopulmonary resuscitation (2 hrs)**

1. Cardiopulmonary resuscitation definition
2. Preagonal state, agony, apparent death
3. Steps of cardiopulmonary resuscitation
4. Emergency aid in accidents
5. Traumatic shock, drowning, electric shock

**Recommended reading for the class**

[4] PP 39-46

**Key questions covered in Practice classes № 5: Module №4 (2 hrs)**

1. Definition of pain syndrome, pathogenesis
2. Local anesthesia, indications, contraindications, complication, performance
3. Infiltration anesthesia indications, contraindications, complication, performance
4. Block anesthesia indications, contraindications, complication, performance
5. Intravenous anesthesia indications, contraindications, complication, performance
6. Spinal and peridural anesthesia indications, contraindications, complication, performance
7. General inhalation anesthesia indications, contraindications, complication, performance
8. General intravenous anesthesia, endotracheal anesthesia indications, contraindications, complication, performance
9. Cardiopulmonary resuscitation definition
10. Preagonal state, agony, apparent death
11. Steps of cardiopulmonary resuscitation
12. Emergency aid in accidents
13. Traumatic shock,
14. Drowning
15. Electric shock

**Methodological instructions for the implementation of independent work on the discipline**

Independent work of students is carried out on the assignment and with the instructional guidance of the teacher, but without his direct involvement. Independent work is divided into independent work on classroom sessions and on extracurricular independent work. Independent work of students includes both fully independent development of individual topics (sections) of discipline, and development of topics (sections) mastered during classroom work. During independent work, students read and take notes of educational, scientific and reference literature, perform tasks aimed at consolidation knowledge and skills development, prepared for ongoing and intermediate control of discipline.