INTERNATIONAL HIGHER SCHOOL OF MEDICINE
Department of Special Surgical Disciplines

SYLLABUS

Elective course: Practical Skills in Examining Patients with Surgical Diseases

2026-2027 academic year
for students of medical faculty
3th course 5th semester, groups
2 credits (60h, including auditorial 72h, independent work – 24h)

Practical classes: **Sarytaeva M.O.**
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Venue: The National Center of Oncology and Hematology

The Syllabus is considered
at the meeting of the department of SSD
Protocol № 1 dated 29.01.2026
Head of the department

Course Objective: Developing students' practical skills in objective examination of surgical patients, clinical thinking, and the ability to integrate data from anamnesis, examination, and instrumental methods to establish a preliminary diagnosis.

After studying the discipline, the student must:

Knowledge:

- Principles of surgical history collection and physical examination methods
- Main symptoms and syndromes of acute surgical diseases (acute appendicitis, cholecystitis, intestinal obstruction, perforation of a hollow organ, etc.);
- Patterns and rules for formulating a diagnosis in surgery (stages, structure, ICD-10);
- Fundamentals of medical deontology and medical ethics;

Skill:

• Perform a general and local examination of the patient;
• Identify physical signs significant for surgical diagnosis.
• Recognize the consequences of emergency surgical interventions.
• Compare the anamnesis, physical examination, and initial examination data.
• Establish rapport with the patient and their relatives; clearly and accurately explain the patient's condition and examination plan;

Attitude:

• Objective examination techniques (inspection, palpation, percussion, auscultation);
• Practical skills in rapid diagnosis of acute surgical diseases;
• Clinical reasoning skills in formulating a diagnosis;
• Practical skills in businesslike and empathic communication; techniques for conducting a conversation with a patient under time constraints

Pre-requisites: anatomy (macro-microanatomy), normal physiology, general pathology, biochemistry, general surgery, internal medicine

Post-requisites: outpatient therapy, outpatient surgery, family medicine

THEMATIC PLAN OF PRACTICAL CLASSES

№	Theme of practical class	**Hours**	**Date**
Unit № 1			
1	General principles of examination of a patient with surgical diseases	2	According to schedule.
2	Examination of a patient with surgical diseases of the esophagus and stomach	2	According to schedule.
3	Examination of a patient with surgical diseases of the small and large intestines	2	According to schedule.
4	Examination of a patient with surgical diseases of the liver, pancreas and biliary tract	2	According to schedule.
5	Examination of a patient with acute abdomen syndrome	2	According to schedule.
6	Examination of patients with ascites and hernias	2	According to schedule.
7	Integrated clinical examination of a patient with GIT pathology	2	According to schedule.
8	**Unit control**	2	According to schedule.
Unit №2			
9	Examination of a patient with surgical heart disease	2	According to schedule.
10	Examination of a patient with surgical diseases of the lungs and pleura	2	According to schedule.
11	Examination of a patient with arterial and venous diseases	2	According to schedule.
12	Examination of a patient with surgical diseases of the skin and soft tissues	2	According to schedule.
13	Examination of a patient with breast diseases	2	According to schedule.
14	Thrombosis and swelling of the extremities	2	According to schedule.
15	Examination of a patient with thyroid disease	2	According to schedule.

16	Examination of a patient with surgical soft tissue infections	2	According to schedule.
17	Comprehensive clinical examination of a surgical patient	2	According to schedule.
18	**Unit control**	2	According to schedule.

THEMATIC PLAN OF INDEPENDENT WORK OF STUDENTS

Unit №	**Theme of independent work**	**Hour**	**Date**
1	Summarize algorithms of anamnesis and physical exam	**24**	
2	Essay: Examination of patient with acute abdomen		
3	Case study: intestinal obstruction		
4	Situational tasks: pleuritis, pneumothorax		
5	Summary of heart and vascular exam		
6	Presentation: Heart and vascular examination		
7	Atlas study: limb		

Recommended reading for the discipline:

1.Basic

1.1 Bailey & Love Short Practice of Surgery. *Vol. 1. 27th ed. Norman S. Williams, P. Ronan O`Connell, Andrew McCaskie.* 2018

1.2 Bailey & Love Short Practice of Surgery. *Vol. 2. 27th ed. Norman S. Williams, P. Ronan O`Connell, Andrew McCaskie.* 2018

1.3 K. Rajgopal Shenoy, Anitha Shenoy (Nileshwar) Manipal Manual of Surgery. 6th ed. Shenoy K.R. 2023

2.**Additional**

1.1 Michael Swash, Michael Glynn Hutchison's Clinical Methods. 22nd ed. Swash M. Glynn M. 2007.

1.2 Greg McLatchie, Neil Borley, Joanna Chikwe Oxford Handbook of Clinical Surgery Fourth edition 2013

1.3 Kailash R Gindodia Handbook of Surgery 2023

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	An unsatisfactory answer indicates that the student is familiar with the course material but fails to highlight key concepts and makes significant errors that distort the meaning of what they have learned. They convey information they have memorized from the teacher or from the textbook, but it has not been logically processed in their mind and is not	Awarded if the student applies it correctly specific terminology, knows the basic, essential provisions of the educational material, but does not know how to explain them, makes individual mistakes and inaccuracies in the content of knowledge and the form of constructing the answer.	A mark is given for the correct assimilation of the program material; however, the answer may contain inaccuracies and minor errors, both in the content and in the form of the answer.	Awarded for a deep understanding of the course material, for the ability to independently explain the concepts being studied, and for a logical, well-constructed answer when the student does not make mistakes and is able to integrate the acquired knowledge with knowledge from related academic disciplines.

	organized into a system of scientific principles and arguments.			
Independent work - 20	0-11	12-15	16-17	18-20
Interval description	Marked if a student fails to complete an assignment, makes serious errors in answering the teacher's questions, or does not have prepared diagrams or tables	Marked if the student has difficulty answering, makes mistakes, or makes inaccuracies.	A mark is given for correct comprehension of the program material; however, the answer may contain inaccuracies and minor errors, both in the content and in the form of the answer.	Awarded for a deep understanding of the course material, for the ability to independently explain the concepts being studied, and for a logical, well-constructed answer when the student does not make mistakes and is able to integrate the acquired knowledge with knowledge from related academic disciplines.
Control work (module) - 40	0-23	24-30	31-35	36-40
Interval description	Other gaps in knowledge of the basic information materials were identified, and fundamental errors were made in answering questions.	Knowledge of the course material to the extent necessary for further mastery of the subject, familiarity with the key literature recommended for the lesson. The student makes mistakes, but has the necessary knowledge to correct them under the guidance of the instructor.	Complete knowledge of the course material and the key literature recommended for the class. The student demonstrates a systematic understanding of the subject and is able to independently expand and update this knowledge throughout their academic and professional careers.	Comprehensive, systematic, and in-depth knowledge of the course material, primary and secondary literature, and the interrelationships between the discipline's key concepts and their relevance to the acquired profession.

Student knowledge evaluation system in class

Determination of the rating during testing is carried out as follows:

Testing of each student is carried out according to test items, randomly generated from the discipline questions. The maximum number of points is 40 points.

Each task has one correct answer.

The passing score is 60%, the number of points scored is determined according to the scheme:

60-75% of correct answers are satisfactory;

76-89% of correct answers - good;

90-100% correct answers - excellent;

less than 60% of correct answers - unsatisfactory.

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

Key questions covered: UNIT 1 — Lesson 1: General principles of examination of a patient with surgical diseases
1. Systematic approach to the surgical patient: History taking and physical exam.
2. Assessment of general status, nutritional state, and vital signs.
3. Preparation for surgery and basic preoperative evaluation.

Recommended reading:
- Bailey & Love Short Practice of Surgery, Vol. 1, 27th ed. — *Chapter 1: Principles of Surgical Practice; History and Examination*
- K.R. Shenoy. *Manipal Manual of Surgery*, 6th ed. — *Chapter 1: History Taking and Clinical Examination*
- Hutchison's Clinical Methods, 22nd ed. — *Chapter 1*

Key questions covered: UNIT 1 — Lesson 2: Examination of a patient with surgical diseases of the esophagus and stomach
1. Clinical features of dysphagia, GORD, and gastric outlet obstruction.
2. Physical signs of gastric malignancy and peptic ulcer complications.
3. Diagnostic modalities: Endoscopy, contrast radiography, and manometry.

Recommended reading:
- Bailey & Love, Vol. 2 — Ch. 58-59;
- Manipal Manual of Surgery — Manipal Manual — Ch. 13.
- Oxford Handbook of Clinical Surgery, 4th ed. — *Section: Surgical Assessment and Preoperative Care*

Key questions covered: UNIT 1 — Lesson 3: Examination of a patient with surgical diseases of the small and large intestines
1. Examination for intestinal obstruction, diverticular disease, and malignancy.
2. Clinical assessment of the perianal region and rectum (Digital Rectal Examination).
3. Inflammatory bowel disease: Clinical presentation and surgical indications.

Recommended reading:
- Bailey & Love, Vol. 2 —*Ch. 61-63; Handbook of Surgery — GI Section.*
- Manipal Manual of Surgery — *Ch 26: GI section*
- Handbook of Surgery, K.R. Gindodia, 2023 — *Section: GI section*

Key questions covered: UNIT 1 — Lesson 4: Examination of a patient with surgical diseases of the liver, pancreas and biliary tract
1. Clinical evaluation of obstructive jaundice and Murphy's sign.
2. Signs of acute and chronic pancreatitis; pancreatic head tumors.
3. Palpation of the liver and gallbladder; differential diagnosis of hepatomegaly.

Recommended reading:
- Bailey & Love, Vol. 2 — *Chapter 54-57: Liver, Gallbladder and Pancreas*
- Hutchison's Clinical Methods — *Chapter 4: Examination of the Abdomen*
- Manipal Manual of Surgery — *Chapter 17: Examination of the Abdomen*

Key questions covered: UNIT 1 — Lesson 5: Examination of a patient with acute abdomen syndrome
1. Pathophysiology of visceral vs. parietal pain.
2. Signs of peritonitis: Guarding, rigidity, and rebound tenderness.
3. Differential diagnosis of acute abdominal pain by quadrants.

Recommended reading:
- Bailey & Love, Vol. 2 — *Chapter 65: The Acute Abdomen*
- Manipal Manual of Surgery — *Chapter 18: Acute Abdomen*
- Oxford Handbook of Clinical Surgery — *Section: Acute Surgical Emergencies*

Key questions covered: UNIT 1 — Lesson 6: Examination of patients with ascites and hernias

1. Physical signs of free fluid: Shifting dullness and fluid thrill.
2. Anatomy and examination of inguinal, femoral, and incisional hernias.
3. Differentiation between reducible, incarcerated, and strangulated hernias.

Recommended reading:

- Hutchison's Clinical Methods — *Chapter 26*
- Manipal Manual of Surgery — *Chapter 19*
- Bailey & Love, Vol. 1 — *Chapter 53*

UNIT 1 — Lesson 7: Integrated clinical examination of a patient with GIT pathology

1. Comprehensive abdominal exam: Inspection to auscultation.
2. Synthesis of history and physical findings for gastrointestinal cases.
3. Formulating a diagnostic plan for complex GI patients.

Recommended reading:

- Bailey & Love, Vol. 2 — *Chapters 58–60^ GIT*
- Manipal Manual of Surgery — *Chapters 13, 14: GIT*
- *Hutchison's Clinical Methods — Ch. 4^ GIT*

UNIT 1 — Lesson 8: Unit Control — Integrated Case Review

1. Practical skills evaluation: Abdominal examination.
2. Clinical reasoning and case-based discussion.
3. Structured surgical note-writing and patient presentation.

Recommended reading:

- Bailey & Love, Vol. 1 — *Chapter 1: Surgical Principles and Assessment*
- Oxford Handbook of Clinical Surgery — *Case Presentations and Handover Skills*

UNIT 2 — Lesson 9: Examination of a patient with surgical heart disease

Key questions covered:

1. Clinical signs of valvular diseases and congenital heart defects.
2. Preoperative assessment for cardiac surgery.
3. Recognition of cardiac tamponade and heart failure in surgical patients.

Recommended reading:

- Hutchison's Clinical Methods — *Chapter 6*
- Manipal Manual of Surgery — *Chapter 15*
- Bailey & Love, Vol. 2 — *Chapter 68*

UNIT 2 — Lesson 10: Examination of a patient with surgical diseases of the lungs and pleura

Key questions covered:

1. Examination for lung cancer, bronchiectasis, and lung abscess.
2. Pleural effusion and empyema: Percussion and auscultation findings.
3. Interpretation of chest X-rays and indications for thoracocentesis.

Recommended reading:

- Bailey & Love, Vol. 2 — *Chapter 71: The Chest and Lungs*
- Manipal Manual of Surgery — *Chapter 15: Respiratory System*
- Oxford Handbook of Clinical Surgery — *Section: Thoracic Conditions*

UNIT 2 — Lesson 11: Examination of a patient with arterial and venous diseases

Key questions covered:

1. Chronic limb ischemia: Fontaine classification and pulse palpation.
2. Varicose veins: Primary vs. secondary; clinical tests (Trendelenburg).
3. Assessment of the diabetic foot and trophic ulcers.

Recommended reading:

- Hutchison's Clinical Methods — *Chapter 5: Arterial Disorders*
- Bailey & Love, Vol. 2 — *Chapter 64: Arterial Disorders*
- Manipal Manual of Surgery — *Chapter 31-32: Peripheral Arterial Disease*

UNIT 2 — Lesson 12: Examination of a patient with surgical diseases of the skin and soft tissues

Key questions covered:

1. Examination of skin tumors (melanoma, BCC, SCC).
2. Assessment of benign swellings: Lipomas, sebaceous cysts, and fibromas.
3. Principles of biopsy and surgical excision.

Recommended reading:

- Bailey & Love, Vol. 1 — *Chapter 3*
- Manipal Manual of Surgery — *Chapter 5-6*
- Handbook of Surgery — *Section: skin diseases*

UNIT 2 — Lesson 13: Examination of a patient with breast diseases
Key questions covered:
1. Systematic breast examination: Triple assessment principle.
2. Differentiation between benign (fibroadenoma) and malignant masses.
3. Axillary lymph node assessment and staging.

Recommended reading:
- Bailey & Love, Vol. 2 — *Chapter 52:*
- Manipal Manual of Surgery — *Chapter 31*
- Oxford Handbook of Clinical Surgery — *Section: Breast Surgery.*

UNIT 2 — Lesson 14: Thrombosis and swelling of the extremities
Key questions covered:
1. Virchow's triad and clinical signs of Deep Vein Thrombosis (DVT).
2. Differential diagnosis of unilateral vs. bilateral limb swelling.
3. Management of lymphedema and post-thrombotic syndrome.

Recommended reading:
- Bailey & Love, Vol. 2 — *Chapter 66: Venous Thrombosis and Pulmonary Embolism*
- Manipal Manual of Surgery — *Chapter 33: Venous and Lymphatic Disorders*
- Handbook of Surgery — *Section: Vascular and Lymphatic Surgery*

UNIT 2 — Lesson 15: Examination of a patient with thyroid disease
Key questions covered:
1. Inspection and palpation of the thyroid gland; assessment of swallowing.
2. Clinical signs of hyperthyroidism (Graves') and hypothyroidism.
3. Evaluation of solitary thyroid nodules and cervical lymphadenopathy.

Recommended reading:
- Bailey & Love, Vol. 2 — *Chapter 51: Thyroid disease*
- Manipal Manual of Surgery — *Chapter 12: Thyroid disease*
- Oxford Handbook of Clinical Surgery — *Section: Thyroid disease*

UNIT 2 — Lesson 16: Examination of a patient with surgical soft tissue infections
Key questions covered:
1. Recognition of cellulitis, carbuncles, and abscesses.
2. Necrotizing fasciitis and gas gangrene: Emergency clinical markers.
3. Principles of incision, drainage, and debridement.

Recommended reading:
- Bailey & Love, Vol. 1 — *Chapter 4: surgical soft tissue infections*
- Manipal Manual of Surgery — *Chapter 8: Surgical soft tissue infections*
- Hutchison's Clinical Methods — *Chapter 16: surgical soft tissue infections*

UNIT 2 — Lesson 17: Comprehensive clinical examination of a surgical patient
Key questions covered:
1. Integration of multisystem examination for the complex surgical patient.
2. Prioritization in emergency vs. elective surgical cases.
3. Final review of clinical reasoning and differential diagnosis.

Recommended reading:
- Hutchison's Clinical Methods — *Chapter 13: clinical examination of a surgical patient*
- Bailey & Love, Vol. 1 — *Chapter 1-2: clinical examination of a surgical patient*
- *Oxford Handbook — Case Presentations.*

UNIT 2 — Lesson 18: Unit Control — Integrated Case
Key questions covered:
1. Final practical assessment of clinical skills.
2. Integrated case review and management priorities.
3. Final evaluation of surgical documentation skills.

Recommended reading:
- Bailey & Love, Vol. 2 — *Chapter 65: Acute Abdomen*

- Manipal Manual of Surgery — *Chapter 18: Acute Abdomen*
- Oxford Handbook of Clinical Surgery — *Acute Care and Emergency Management*

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

Methodological Instructions for the Implementation of Independent Work on the Discipline
It is recommended to perform independent work in the form of structured tables, charts, essays, case reports, and clinical algorithms. Examples and formats are given below. Each task must be submitted in written or presentation form and approved by the mentor.

IWS 1 — Algorithms for History Taking and Physical Examination

Step	Description	Clinical Purpose	Example Question
1. Patient Identification	Name, age, gender, occupation	Establishes demographic and risk background	"What is your occupation?"
2. Chief Complaint	Main symptom and duration	Defines the main problem	"What brought you to the hospital?"
3. History of Present Illness	Onset, character, location, radiation, duration	Helps to localize pathology	Abdominal pain – colicky or constant
4. Past Medical & Surgical History	Previous diseases and operations	Detects predisposing factors	"Have you had any surgeries before?"
5. Physical Examination	Inspection, palpation, percussion, auscultation	Objective evaluation	Example: Palpation of the abdomen
6. Summary & Differential Diagnosis	Combine findings	Clinical reasoning	Acute appendicitis vs. gastroenteritis

IWS 2 — Essay: Examination of a Patient with Acute Abdomen
Structure:
1. Definition: Acute abdomen — sudden onset of severe abdominal pain requiring urgent diagnosis and treatment.
2. Etiology: Perforated ulcer, appendicitis, intestinal obstruction, pancreatitis, cholecystitis, etc.
3. Clinical features: Pain, vomiting, distention, rigidity, fever.
4. Physical examination: Inspection, palpation, percussion, auscultation.
5. Investigations: CBC, urinalysis, ultrasound, X-ray (air under diaphragm).
6. Management: Immediate resuscitation (ABC), IV fluids, analgesia, surgical consultation.
7. Conclusion: Timely diagnosis is crucial to prevent complications and ensure successful surgery.

IWS 3 — Case Study: Intestinal Obstruction

Parameter	Patient Data	Interpretation
Age / Gender	55-year-old male	Elderly → possible malignancy
Chief complaint	Abdominal pain, distention, no stool for 3 days	Suggestive of obstruction
Examination findings	Tympanitic abdomen, visible peristalsis	High obstruction

Investigation	X-ray: multiple air-fluid levels	Confirms mechanical obstruction
Diagnosis	Small bowel obstruction due to adhesions	Clinical + radiological correlation
Management	IV fluids, nasogastric decompression, surgery if no improvement	Stepwise management

IWS 4 — Problem-Solving Tasks: Pleuritis and Pneumothorax

Parameter	Pleuritis	Pneumothorax
Etiology	Infection, TB, trauma	Ruptured bleb, trauma, iatrogenic
Pain	Sharp, localized, increases with breathing	Sudden, stabbing, radiates to shoulder
Breath sounds	Decreased, pleural rub present	Absent on affected side
Percussion	Dullness	Hyperresonance
X-ray findings	Pleural effusion with fluid level	Absent lung markings, visible pleural line
Treatment	Antibiotics, thoracocentesis	Needle decompression, chest tube drainage

IWS 5 — Summary: Results of Cardiovascular and Vascular Examination

Parameter	Finding	Clinical Interpretation
Pulse	Rate, rhythm, volume	Tachycardia → fever/pain; irregular → AF
Blood pressure	Normal: 120/80 mmHg	Hypertension / hypotension
Jugular venous pressure	Elevated in right heart failure	Fluid overload
Heart sounds	S1, S2, murmurs	Systolic murmur → valve disease
Peripheral pulses	Dorsalis pedis, femoral, radial	Weak pulse → arterial obstruction
Edema	Pitting/non-pitting	Cardiac vs. venous vs. lymphatic cause

IWS 6 — Presentation: Examination of the Heart and Blood Vessels

Presentation structure:

1. Introduction: Importance of cardiovascular examination in surgery.
2. Steps:
   - Inspection (precordium, pulsations)
   - Palpation (apex beat, thrills)
   - Percussion (cardiac borders)
   - Auscultation (heart sounds, murmurs)

- Peripheral vascular examination

3. Common pathologies:
   - Valvular heart disease
   - Peripheral arterial disease
   - Varicose veins
4. Clinical correlations: Linking symptoms to surgical risk assessment.
5. Conclusion: Systematic examination improves diagnostic accuracy and surgical safety.

List of Performed Manipulations

Manipulation	Date	Signature of Mentor
Practice palpation and percussion of the abdomen on simulator models		……..
Perform auscultation of bowel and heart sounds on training mannequins		……..
Practice chest examination techniques (inspection, percussion, auscultation)		……..
Simulate vascular examination and pulse palpation in lower limbs		……..
Prepare presentation “Examination of the Cardiovascular System”		……..