INTERNATIONAL HIGHER SCHOOL OF MEDICINE
Department of Introduction to Therapy and Family Medicine

SYLLABUS

Polyclinic therapy
2026-2027 academic year
for students of medical faculty
5rd course 9 semester, groups 1- 40 (1-15 Issyk-Kul)
5rd course 10 semester, groups 1- 8 (1-3 Issyk-Kul)
8 credits (240 h, including auditorial 136 h, independent work – 104 h)

Lecturer: Sabirov Ibragim
0555 816 842(WhatsApp)

Venue: Online-Zoom

Practical classes: Hossain Syed Azfar,
0705 425 709(WhatsApp)
Email: hossainsyedazfar@gmail.com
Arstanbaeva Aisezim Bakytovna
0708 614 903(WhatsApp)
Email: arsaisez@gmail.com
Tatyna Abdurakhmanova
0990 774 469(WhatsApp)
Email: tatyna210498@gmail.com
Ormokoeva Aigul
0556 120 672(WhatsApp)
Email: ormokoevaaigyl@mail.ru
Zholdoshalieva Zhyldyz Shamyrbekovna
0500 877 322(WhatsApp)
Email: jyldyzshamyrbekovna@gmail.com
Valieva Edisa Bectursunovna
0559 555 591(WhatsApp)
Email: edisavalieva1961@gmail.com
Islam Surkeev
0703 234 500(WhatsApp)
Email: surkeevislam@gmail.com
Askarova Chynar Edilbekovna
0997 444 651(WhatsApp)
Email: askarova.chinara1993@gmail.com
Burhanova S.
0550 736 473(WhatsApp)
Email: sunny.sayara@gmail.com

Venue: Vedanta clinic, Vedanta nefro, simulation center, polyclinic №4

The Syllabus is considered
at the meeting of the department of
Introduction to Therapy and Family Medicine
Protocol № 1 dated 27.08.2026
Head of the department Kamchybekova A.

Course Objective: The objective of studying the discipline **Polyclinic Therapy** is to acquire knowledge of the work of a polyclinic physician, as well as the principles of organizing medical and preventive care, along with the abilities and skills in early diagnosis, treatment, and prevention of diseases in the outpatient (polyclinic) setting.

The objectives of the discipline are:

1. To master the basic principles of organizing medical and preventive care for the general population in the conditions of a polyclinic.
2. To acquire knowledge of the specific features of organization and the scope of work of a polyclinic physician (therapist).
3. To become familiar with the modern diagnostic capabilities of outpatient services and to learn their rational use.
4. To develop clinical thinking skills for the early diagnosis of the most common diseases in outpatient practice, taking into account their course, treatment, primary and secondary prevention, and dispensary follow-up.
5. To train 5th-year students, under the supervision of a teacher, to independently provide emergency care at the pre-hospital stage in cases of acute diseases and urgent conditions.

After study of the discipline the student must:

Knowledge:

- principles of the organization of reception of patients in the clinic and at home, the methodology of diagnosis;
- Semiotics and differential diagnosis of diseases, international classification of causes of disease and death;
- Tactics of clinical examination of the patient at the prehospital stage;
- Diagnostic algorithm of examination during dispensary observation, in the direction of hospitalization, day hospital, sanatorium-resort treatment, rehabilitation centers, in the provision of palliative care;
- Methods of examination of the patient at home;
- Fundamentals of modern preventive medicine; the principles for the provision of clinical examination of the population and prophylactic medical examinations; personnel subject to dispensary observation; guidelines for clinical examinations; clinical group accounting.
- the order and purpose of the regular medical examination by a general practitioner of patients with chronic non-communicable diseases and patients at high risk of their development;
- principles of organization of work of the district doctor to identify early and latent forms of diseases and risk factors;
- principles and methods of outpatient treatment, rehabilitation and prophylactic of diseases of the respiratory organs, blood circulation, digestion, liver, biliary tract, urogenital system, metabolic disorders and connective tissue;
- rules for prescribing and taking medications, monitoring treatment;
- morbidity analysis with temporary disability, the structure of disability;
- methods of medical and social expertise;

Skill:

- in a limited time to qualitatively determine the status of the patient; collect anamnesis, conduct a survey of the patient and / or his relatives, conduct a physical examination of the patient (examination, palpation, auscultation, blood pressure measurement, determine the properties of the arterial pulse, etc.) and identify the main objective data confirming the diagnosis;
- outline the scope of research in accordance with the prognosis of the disease, to clarify the diagnosis and obtain a reliable result;
- formulate a clinical diagnosis;
- to determine the indications for hospitalization of patients with a therapeutic profile and to realize hospitalization in an emergency and planned manner;
- choose the best treatment option, prescribe copper stone therapy, taking into account the pharmacokinetics and pharmacodynamics of drugs, prevention of their undesirable side effects;
- write recipes;
- to determine the indications for setting / removing patients with chronic non-communicable diseases or a high risk of their development at the dispensary observation, to monitor the target indicators of physiological parameters in its process; plan, organize and conduct clinical follow-up of the population, plan for primary and secondary prevention, evaluate the effectiveness of clinical examination; plan and keep records of sanitation and educational work;
- to train patients and their relatives in the development of emergency conditions;
- provide first aid in case of emergency before the arrival of ambulance;
- determine the cause of temporary disability, the criteria for recovery and restoration of working capacity;

- ❖ timely identify signs of disability, predict a group, draw up documents for referral to medical and social expertise;

Attitude: ECG (must know Acute MI, AV block, block Bundle of Gis, extrasystoles), peak flowmetry

Pre-requisites. To successful study this discipline, the student uses the knowledge, skills and activities mastered in the study of previous disciplines: pathological physiology, pathological anatomy, pharmacology, public health, propaedeutic of internal diseases, radiation diagnosis, faculty therapy, occupational diseases

Post-requisites. Knowledge of the discipline « Polyclinic therapy» serve as a theoretical and practical basis for the preparation of the state final certification.

THEMATIC PLAN OF LECTURES

№	**Topics of the lectures**	**Hours**	**Date**
1.	Outpatient management of patients with acute respiratory diseases	2	Sep.2026
2.	Community-acquired pneumonia (typical, atypical)	2	Sep.2026
3.	Outpatient management of patients with bronchial asthma	2	Sep.2026
4.	Outpatient management of patients with COPD. CPH.	2	Sep.2026
5.	Outpatient management of patients with hypertension syndrome	2	Sep.2026
6.	Atherosclerosis. Outpatient management of patients with CHD, stable and unstable angina (acute coronary syndrome).	2	Sep.2026
7.	Outpatient management of patients with heart failure	2	Sep.2026
8.	Outpatient management of patients with rheumatic fever, valvular heart disease.	2	Sep.2026
9.	Outpatient management of patients with gastritis, peptic ulcer disease	2	Oct.2026
10.	Outpatient management of patients with chronic cholecystitis, cholangitis, JP, cholelithiasis, postcholecystectomic syndrome.	2	Oct.2026
11.	Outpatient management of patients with articular syndrome.	2	Oct.2026
12.	Outpatient management of patients with Irritable Bowel Syndrome (IBS). Crohn's Disease.	2	Oct.2026
13.	Outpatient management of patients with chronic hepatitis, cirrhosis of the liver	2	Oct.2026
14.	Outpatient management of patients with renal disease (glomerulonephritis, pyelonephritis, chronic renal failure)	2	Oct.2026
15.	Outpatient management of patients with iron deficiency anemia (IDA)	2	Oct.2026
16.	Outpatient management of patients with diabetes mellitus (DM), thyroid diseases.	2	Oct.2026
	Total:	**32**	

THEMATIC PLAN OF PRACTICAL CLASSES

Units №	**Theme Seminars**	**Hours**	**Date**
I	**Lesson 1**: Etiopathogenesis, clinical features, complications and management of common viral respiratory infections (COVID-19, SARS, Influenza). **Lesson 2:** Community-acquired pneumonia, nosocomial pneumonia and aspiration pneumonia: etiology, types, pathogenesis, stages, morphology, clinical presentation, natural history and complications.	4 4	Sep.2026

	Lesson 3: Unit Control	2	
II	**Lesson 4:** Obstructive airway disease: classification, diagnostic approach and assessment of severity, clinical examination findings (respiratory rate, level of respiratory distress, effort tolerance, breath sounds, added sounds, signs of consolidation, pleural effusion and pneumothorax). **Lesson 5**: Pulmonary function tests: interpretation. Obstructive airway disease (OAD) and bronchiectasis: etiology, types, pathogenesis, stages, morphology, complications and evaluation. **Lesson 6**: Heart failure: etiology, types, stages, pathophysiology, pathology and complications; right vs left heart failure, systolic vs diastolic failure. **Lesson 7**: Unit Control	4 4 4 2	Sep.2026
III	**Lesson 8:** Hypertension: definition, classification, primary vs secondary hypertension, clinical manifestations of secondary causes, medical history (duration and levels, symptoms, comorbidities, lifestyle, risk factors, family history, psychosocial and environmental factors, dietary assessment, previous and concomitant therapy). **Lesson 9**: Ischemic heart disease and acute coronary syndromes: epidemiology, risk factors, etiology, pathophysiology, clinical features, diagnostic tests, complications; differentiation of stable and unstable angina and acute myocardial infarction; indications for coronary care, supportive therapy, cardiac rehabilitation, management of complications, and lifestyle counseling. **Lesson 10**: Heart failure and common heart diseases: etiology, types, stages, pathophysiology, pathology and complications; epidemiology, genetic basis, pathogenesis, clinical evolution and course of rheumatic/valvular, ischemic, hypertrophic and inflammatory heart disease; heart failure staging; right vs left heart failure, systolic vs diastolic failure—key distinctions; differential diagnosis prioritized by clinical presentation; pharmacology in heart failure (diuretics, ACE inhibitors, beta-blockers, aldosterone antagonists, cardiac glycosides)—indications and contraindications; adult congenital heart disease —focused history, general examination, salient clinical findings, and management plan. **Lesson 11:** Arrhythmias in heart failure (especially atrial fibrillation): pathogenesis and development; peripheral pulse assessment (rate, volume, character, quality, variability) across causes of heart failure; 12-lead ECG—performance and interpretation. **Lesson 12:** Pharmacology in heart failure management: diuretics, ACE inhibitors, beta blockers, aldosterone antagonists, cardiac glycosides—indications and contraindications; management planning for heart failure patients based on type of failure and underlying etiology. **Lesson 13:** Unit control	4 4 4 4 4 2	Oct.2026
IV	**Lesson 14**: Rheumatic fever and rheumatic valvular heart disease: etiology, microbiology, pathophysiology, pathology, gross and microscopic features, diagnostic criteria, clinical evolution, complications (including infective endocarditis); recognition and management; penicillin prophylaxis and its complications; diagnostic testing—12-lead ECG, chest radiograph, blood cultures—ordering and interpretation. **Lesson 15**: Differential diagnosis in heart diseases based on clinical presentation; acute and subacute endocarditis—clinical features, echocardiographic findings, blood culture and sensitivity, therapy; adult congenital heart disease—history, general examination, clinical findings and management plan. **Lesson 16**: Unit control	4 4 2	Oct.2026
V	**Lesson 17**: Autoimmune diseases: pathophysiology and genetic basis; joint pain—acute, subacute and chronic causes; systemic manifestations of rheumatologic diseases. **Lesson 18:** Differential diagnosis in rheumatologic diseases: clinical features suggesting specific etiologies; diagnostic work-up based on presumed etiology; autoimmune testing—indications and interpretation of CBC, anti-CCP, RF, ANA, anti-DNA and related tests. Treatment options for systemic	4 4	Nov.2026

	rheumatologic conditions: selection, prescription. **Lesson 19:** Unit control	 2	
VI	**Lesson 20**: Upper and lower GI bleeding: aetiology; diagnostic testing by clinical diagnosis (complete blood count, PT/PTT, stool examination, fecal occult blood, liver function tests, H. pylori test); acid-peptic disease (including Helicobacter pylori): indications, pharmacology and adverse effects of pharmacotherapy. **Lesson 21:** Cholelithiasis and cholecystitis: pathophysiology, clinical evolution and complications; diagnostic testing (CBC, bilirubin, liver function tests, hepatitis serology, ascitic fluid analysis). **Lesson 22:** Acute and chronic diarrhea: aetiology (infectious and non-infectious causes); differentiation of Crohn's disease and ulcerative colitis by clinical presentation; pharmacotherapy in chronic diarrhea including immunotherapy—indications, pharmacology and adverse effects. **Lesson 23**: Infective (viral) hepatitis: epidemiology, microbiology, immunology and clinical evolution; cirrhosis of the liver and portal hypertension: pathophysiology, clinical evolution and complications (ascites, spontaneous bacterial peritonitis, hepatorenal syndrome, hepatic encephalopathy, acute GI bleed, hepatocellular carcinoma); management of hepatitis, cirrhosis, portal hypertension and related complications. **Lesson 24**: Unit control	4 4 4 4 2	Nov.2026
VII	**Lesson 25:** Glomerular diseases: definition and classification; glomerulonephritis—etiology, pathogenesis, mechanisms of glomerular injury, pathology, distinguishing features and clinical manifestations. **Lesson 26:** Acute and chronic pyelonephritis and reflux nephropathy: etiology, pathogenesis, pathology, laboratory findings, distinguishing features, progression and complications. **Lesson 27:** Chronic kidney disease (CKD): etiology and staging; uremia—pathophysiology and clinical findings; supportive therapy in CKD (diet, antihypertensives, glycemic therapy, dyslipidemia, anemia, hyperkalemia, hyperphosphatemia, secondary hyperparathyroidism). **Lesson 28**: Unit control	4 2 4 2	Dec.2026
VIII	**Lesson 29:** Diabetes: definition and classification; diagnostic and severity assessment—systematic clinical examination (skin, peripheral pulses, blood pressure, fundus, detailed foot exam: pulses, neuropathy, deformities, injuries); laboratory evaluation for diagnosis (glucose tests, oral glucose tolerance test, HbA1c, urinary microalbumin, ECG, electrolytes, ABG, ketones, renal function tests, lipid profile); pharmacologic therapies—indications, contraindications, adverse reactions and drug interactions. **Lesson 30:** Thyroid diseases: hypothyroidism and hyperthyroidism—epidemiology, pathogenesis, role of iodine deficiency and autoimmunity; differential diagnosis based on clinical presentation; pharmacology of thyroxine and antithyroid drugs—indications, adverse reactions, interactions; management of thyrotoxicosis—indications for thionamide therapy, radioiodine therapy and surgery. **Lesson 31:** Anemia: definition and classification based on red blood cell size and reticulocyte count; diagnostic approach to determine etiology; replacement therapy with iron, vitamin B12 and folate. **Lesson 32:** Unit control	2 2 2 2	Dec.2026
	Total:	**104**	

THEMATIC PLAN OF INDEPENDENT WORK OF STUDENTS

Unit №	Theme of independent work	Hours
I	Outpatient management of patients with acute respiratory diseases. Acute pneumonia.	16
II	Outpatient management of patients with asthma, COPD, CCP	12

III	Outpatient management of patients with hypertension. Acute coronary syndrome. CHF.	4
IV	Outpatient management of patient's rheumatic fever. Rheumatic heart disease.	16
V	Outpatient management of patients with articular syndrome.	18
VI	Outpatient management of patients with diseases of the stomach, intestine, gall bladder, pancreas and liver.	4
VII	Outpatient management of patients with kidney disease (Ch. glomerulonephritis, pyelonephritis, CKD). Outpatient management of patients with disease of liver (hepatitis and cirrhosis).	16
VIII	Outpatient management of patients with diabetes mellitus. Outpatient management of patients with disease of thyroid gland (Graves' disease, hypothyroidism, myxedema). Anemia.	18
	Total:	**104**

Recommended reading for the discipline:

Required reading

№	Authors	Title	Publication year	Available in the ISM library (quantity)
1	Kumar and Clark's	Clinical Medicine (11th edition)	2023	50
2	Harrison's	Principles of Internal Medicine (22nd edition)	2025	20

Recommended reading

№	Authors	Title	Publication year	Available in the ISM library (quantity)
1	Davidson's	Principles and Practice of Medicine (25th edition)	2026	30

Resources of the Internet information and telecommunication network:

1. 2018 ESC/ESH Clinical Practice Guidelines for the Management of Arterial Hypertension. 2018. http:// OP-EHEA180345 3021..3118 (silverchair.com)
   Guidelines on Management of Acute Myocardial Infarction in Patients Presenting with ST-Segment Elevation ESC Clinical Practice Guidelines, 2017. http://2017 ESC Guidelines for the management of acute myocardial infarction in patients presenting with ST-segment elevation | European Heart Journal | Oxford Academic (oup.com)
   2020 Acute Coronary Syndromes (ACS) in Patients Presenting without Persistent ST-Segment Elevation (Management of) Guidelines http:// OP-EHEA200574 1289..1367 (silverchair.com)
   2021 ESC Guidelines for the diagnosis and treatment of acute and chronic heart failure. European Heart Journal (2021) 42, 35993726 doi:10.1093/eurheartj/ehab36 http:// 2021 ESC Guidelines for the diagnosis and treatment of

acute and chronic heart failure (escardio.org)
2. Acute respiratory infections. The Marshall Protocol Knowledge base. www. Acute respiratory infections (MPKB)
3. 2009 AHA Guidelines on Prevention of Rheumatic Fever and Diagnosis and Treatment of Acute Streptococcal Pharyngitis
4. 2021 American College of Rheumatology Guideline for the Treatment of Rheumatoid Arthritis

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

Gradingcriteriaperdiscipline				
Maximum score	Intervals			
	«unsatisfactory»	«satisfactory»	«good»	«excellent»
Current control - 40	0-23	24-30	31-35	36-40
Interval description	Does not know theory, and does not know how to apply practical skills, does not know how to communicate	Knows little theory, applies some practical skills, average communication skills	Knows the theory, but makes mistakes, mastered practical skills and communications well	Knows the theory and correctly applies practical skills, communication skills are developed
Independent work - 20	0-11	12-15	16-17	18-20
Interval description	Nothing completed over or completed over but everything wrong	H/W handed over, but not completely and with mistakes	Not all h/w surrendered, or surrendered completely, but there are mistakes	All h/w handed over complete and correctly
Control work (module) - 40	0-23	24-30	31-35	36-40
Interval description	Doesn't know anything, doesn't know how to apply practical skills	Knows little theory, knows how to apply some practical skills	Knows theory but makes mistakes, applies practical skills well	Knows theory and applies practical skills correctly

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 I:

Unit I. Key questions covered in lesson 1: Etiopathogenesis, clinical features, complications and management of common viral respiratory infections (COVID-19, SARS, Influenza).

1. Ambulatory treatment of patients with acute upper respiratory disease
2. Hospitalization criteria's
3. Interpreted lab.tests (CBC, urine tests, sputum test, CRP etc.)
4. Interpreted instrumental examination (Peak flowmetry, Chest X-ray)

Recommended reading for this discipline:

[1] Clinical Pearls in PULMONOLOGY (2018)
[2] Criner, Gerard J._ Herth, Felix JF_ Lee, YC Gary YC_ Shah, Pallav - Essentials of Clinical Pulmonology (2018, CRC Press)

Unit I. Key questions covered in lesson 2: Community-acquired pneumonia, nosocomial pneumonia and aspiration pneumonia: etiology, types, pathogenesis, stages, morphology, clinical presentation, natural history and complications.

1. Ambulatory treatment of patients with atypical and typical pneumonia
2. Hospitalization criteria's
3. Interpreted lab.tests (CBC, urine tests, sputum test, CRP etc.)
4. Interpreted instrumental examination (Peak flow-metry, Chest X-ray)

Recommended reading for this discipline:

[1] Clinical Pearls in PULMONOLOGY (2018)
[2] Criner, Gerard J._ Herth, Felix JF_ Lee, YC Gary YC_ Shah, Pallav - Essentials of Clinical Pulmonology (2018, CRC Press)

Unit I. Key questions covered in lesson 3: Unit Control

Recommended reading for this discipline:

[1] Clinical Pearls in PULMONOLOGY (2018)
[2] Criner, Gerard J._ Herth, Felix JF_ Lee, YC Gary YC_ Shah, Pallav - Essentials of Clinical Pulmonology (2018, CRC Press)

Unit II. Key questions covered in lesson 1: Obstructive airway disease: classification, diagnostic approach and assessment of severity, clinical examination findings (respiratory rate, level of respiratory distress, effort tolerance, breath sounds, added sounds, signs of consolidation, pleural effusion and pneumothorax).

1. Ambulatory treatment of patients with chronic respiratory diseases.
2. Hospitalization criteria's
3. Interpreted lab.tests (CBC, urine tests, sputum test, CRP, RF, LFT, KFT etc.)
4. Interpreted instrumental examination (Peak flowmetry, Chest X-ray, X-ray of sinus)

Recommended reading for this discipline:

[1] Clinical Pearls in PULMONOLOGY (2018)
[2] Criner, Gerard J._ Herth, Felix JF_ Lee, YC Gary YC_ Shah, Pallav - Essentials of Clinical Pulmonology (2018, CRC Press)

Unit II. Key questions covered in lesson 2: Pulmonary function tests: interpretation. Obstructive airway disease (OAD) and bronchiectasis: etiology, types, pathogenesis, stages, morphology, complications and evaluation.

1. Ambulatory treatment of patients with chronic respiratory diseases
2. Hospitalization criteria's
3. Interpreted lab.tests (CBC, urine tests, sputum test, CRP, RF, LFT, KFT etc.)
4. Interpreted instrumental examination (Peak flowmetry, Chest X-ray, X-ray of sinus)

Recommended reading for this discipline:

[1] Clinical Pearls in PULMONOLOGY (2018)

[2] Criner, Gerard J._ Herth, Felix JF_ Lee, YC Gary YC_ Shah, Pallav - Essentials of Clinical Pulmonology (2018, CRC Press)

Unit II Key questions covered in lesson 3: Heart failure: etiology, types, stages, pathophysiology, pathology and complications; right vs left heart failure, systolic vs diastolic failure.

2. Hospitalization criteria's
3. Interpreted lab.tests (CBC, urine tests, sputum test, CRP, RF, LFT, KFT etc.)
4. Interpreted instrumental examination (Peak flowmetry, Chest X-ray, ECG)

Recommended reading for this discipline:

[1] Clinical Pearls in PULMONOLOGY (2018)

[2] Criner, Gerard J._ Herth, Felix JF_ Lee, YC Gary YC_ Shah, Pallav - Essentials of Clinical Pulmonology (2018, CRC Press)

Unit II Key questions covered in lesson 4: Unit Control

1. Ambulatory treatment of patients with complications of respiratory disease
2. Hospitalization criteria's
3. Interpreted lab.tests (CBC, urine tests, sputum test, CRP, RF, LFT, KFT etc.)
4. Interpreted instrumental examination (Peak flowmetry, Chest X-ray, X-ray of sinus)

Recommended reading for this discipline:

[1] Clinical Pearls in PULMONOLOGY (2018)

[2] Criner, Gerard J._ Herth, Felix JF_ Lee, YC Gary YC_ Shah, Pallav - Essentials of Clinical Pulmonology (2018, CRC Press)

Unit III Key questions covered in lesson 1: Hypertension: definition, classification, primary vs secondary hypertension, clinical manifestations of secondary causes, medical history (duration and levels, symptoms, comorbidities, lifestyle, risk factors, family history, psychosocial and environmental factors, dietary assessment, previous and concomitant therapy).

1. Differential diagnosis of HPT
2. Ambulatory treatment of patients with hypertension
3. Hospitalization criteria's
4. Interpreted lab.tests (CBC, urine tests, CRP, biochemical tests, markers of MI)
5. Interpreted instrumental examination (Chest X-ray, ECG, EcoCG, abdominal ultrasonography)

Recommended reading for this discipline:

[1] Principles and practice of Medicine / editor- in -chief, Davidson 's 22 th ed.- Churchil Livingstone, 2014-1313 p.

[2] Kumar and Clark 's Clinical Medicine / editor- in-chief, P. Kumar / M. Clark 7 th ed.-Saunders Elesevier, 2009-1273 p

Unit III Key questions covered in lesson 2 Ischemic heart disease and acute coronary syndromes: epidemiology, risk factors, etiology, pathophysiology, clinical features, diagnostic tests, complications; differentiation of stable and unstable angina and acute myocardial infarction; indications for coronary care, supportive therapy, cardiac rehabilitation, management of complications, and lifestyle counseling.

1. Differential diagnosis of ACS
2. Ambulatory treatment of patients
3. Hospitalization criteria's
4. Interpreted lab.tests (CBC, urine tests, CRP, LFT, KFT, cholesterol, triglycerides etc.)
5. Interpreted instrumental examination (Chest X-ray, ECG, abdominal ultrasonography)

Recommended reading for this discipline:

[1] Principles and practice of Medicine / editor- in -chief, Davidson 's 22 th ed.- Churchil Livingstone, 2014-1313 p.

[2] Kumar and Clark 's Clinical Medicine / editor- in-chief, P. Kumar / M. Clark 7 th ed.-Saunders Elesevier, 2009-1273 p

Unit III Key questions covered in lesson 3: Heart failure and common heart diseases: etiology, types, stages, pathophysiology, pathology and complications; epidemiology, genetic basis, pathogenesis, clinical evolution and course of rheumatic/valvular, ischemic, hypertrophic and inflammatory heart disease; heart failure staging; right vs left heart failure, systolic vs diastolic failure—key distinctions; differential diagnosis prioritized by clinical presentation;

pharmacology in heart failure (diuretics, ACE inhibitors, beta-blockers, aldosterone antagonists, cardiac glycosides)—indications and contraindications; adult congenital heart disease—focused history, general examination, salient clinical findings, and management plan.
1. Ambulatory treatment of patients with complication of cardiac disorders
2. Hospitalization criteria's
4. Interpreted lab.tests (CBC, urine tests, CRP, LFT, KFT, cholesterol, triglycerides etc.)
5. Interpreted instrumental examination (Chest X-ray, ECG, abdominal ultrasonography)
Recommended reading for this discipline:
[1] Principles and practice of Medicine / editor- in -chief, Davidson 's 22 th ed.- Churchil Livingstone, 2014-1313 p.
[2] Kumar and Clark 's Clinical Medicine / editor- in-chief, P. Kumar / M. Clark 7 th ed.-Saunders Elesevier, 2009-1273 P

Unit III Key questions covered in lesson 4: Arrhythmias in heart failure (especially atrial fibrillation): pathogenesis and development; peripheral pulse assessment (rate, volume, character, quality, variability) across causes of heart failure; 12-lead ECG—performance and interpretation.
1. Emergency treatment of patients with arrhythmias
2. Hospitalization criteria's
3. Interpreted lab.tests (CBC, urine tests, CRP, LFT, KFT, electrolyte's)
4. Interpreted instrumental examination (Chest X-ray, ECG, daily ECG (in 24 h)., abdomen ultrasonography)
Recommended reading for this discipline:
[1] Principles and practice of Medicine / editor- in -chief, Davidson 's 22 th ed.- Churchil Livingstone, 2014-1313 p.
[2] Kumar and Clark 's Clinical Medicine / editor- in-chief, P. Kumar / M. Clark 7 th ed.-Saunders Elesevier, 2009-1273 P

Unit III Key questions covered in lesson 5: Pharmacology in heart failure management: diuretics, ACE inhibitors, beta blockers, aldosterone antagonists, cardiac glycosides—indications and contraindications; management planning for heart failure patients based on type of failure and underlying etiology.
1. Emergency treatment of patients with heart failure
2. Hospitalization criteria's
3. Interpreted lab.tests (CBC, urine tests, CRP, LFT, KFT, electrolyte's)
4. Interpreted instrumental examination (Chest X-ray, ECG, daily ECG (in 24 h)., abdomen ultrasonography)
Recommended reading for this discipline:
[1] Principles and practice of Medicine / editor- in -chief, Davidson 's 22 th ed.- Churchil Livingstone, 2014-1313 p.
[2] Kumar and Clark 's Clinical Medicine / editor- in-chief, P. Kumar / M. Clark 7 th ed.-Saunders Elesevier, 2009-1273 P

Unit III Key questions covered in lesson 5: Unit control
1. Emergency treatment of patients with arrhythmias
2. Hospitalization criteria's
3. Interpreted lab.tests (CBC, urine tests, CRP, LFT, KFT, electrolyte's)
4. Interpreted instrumental examination (Chest X-ray, ECG, daily ECG (in 24 h)., abdomen ultrasonography)
Recommended reading for this discipline:
[1] Principles and practice of Medicine / editor- in -chief, Davidson 's 22 th ed.- Churchil Livingstone, 2014-1313 p.
[2] Kumar and Clark 's Clinical Medicine / editor- in-chief, P. Kumar / M. Clark 7 th ed.-Saunders Elesevier, 2009-1273 P

Unit IV Key questions covered in lesson 1: Rheumatic fever and rheumatic valvular heart disease: etiology, microbiology, pathophysiology, pathology, gross and microscopic features, diagnostic criteria, clinical evolution, complications (including infective endocarditis); recognition and management; penicillin prophylaxis and its complications; diagnostic testing—12-lead ECG, chest radiograph, blood cultures—ordering and interpretation.
1. Ambulatory treatment of patients
2. Hospitalization criteria's
3. Interpreted lab.tests (CBC, urine tests, CRP, RF, KFT, biochemical tests)
4. Interpreted instrumental examination (Chest X-ray, X-ray of joints, ECG, EcoCG, abdominal ultrasonography)
Recommended reading for this discipline:
[1] Firestein and Kelley's Textbook of Rheumatology 2-Volume Set, 11 th edition (2020)

Unit IV Key questions covered in lesson 2: Differential diagnosis in heart diseases based on clinical presentation; acute and subacute endocarditis—clinical features, echocardiographic findings, blood culture and sensitivity, therapy; adult congenital heart disease—history, general examination, clinical findings and management plan.
1. Ambulatory treatment of patients

2. Hospitalization criteria's
3. Interpreted lab.tests (CBC, urine tests, CRP, RF, KFT, biochemical tests)
4. Interpreted instrumental examination (Chest X-ray, X-ray of joints, ECG, EcoCG, abdominal ultrasonography)
Recommended reading for this discipline:
[1] Firestein and Kelley's Textbook of Rheumatology 2-Volume Set, 11 th edition (2020)

Unit IV Key questions covered in lesson 3: Unit control
1. Ambulatory treatment of patients
2. Hospitalization criteria's
3. Interpreted lab.tests (CBC, urine tests, CRP, RF, KFT, biochemical tests)
4. Interpreted instrumental examination (Chest X-ray, X-ray of joints, ECG, EcoCG, abdominal ultrasonography)
Recommended reading for this discipline:
[1] Firestein and Kelley's Textbook of Rheumatology 2-Volume Set, 11 th edition (2020)

Unit V Key questions covered in lesson 1: Autoimmune diseases: pathophysiology and genetic basis; joint pain—acute, subacute and chronic causes; systemic manifestations of rheumatologic diseases.
1. Ambulatory treatment of patients
2. Hospitalization criteria's
3. Interpreted lab.tests (CBC, urine tests, CRP, RF, KFT, biochemical tests)
4. Interpreted instrumental examination (Chest X-ray, X-ray of joints, ECG, EcoCG, abdominal ultrasonography, biopsy of skin)
Recommended reading for this discipline:
[1] Firestein and Kelley's Textbook of Rheumatology 2-Volume Set, 11 th edition (2020)

Unit V Key questions covered in lesson 2: Differential diagnosis in rheumatologic diseases: clinical features suggesting specific etiologies; diagnostic work-up based on presumed etiology; autoimmune testing—indications and interpretation of CBC, anti-CCP, RF, ANA, anti-DNA and related tests. Treatment options for systemic rheumatologic conditions: selection, prescription.
1. Ambulatory treatment of patients
2. Hospitalization criteria's
3. Interpreted lab.tests (CBC, urine tests, CRP, RF, KFT, biochemical tests)
4. Interpreted instrumental examination (Chest X-ray, X-ray of joints, ECG, EcoCG, abdominal ultrasonography, biopsy of skin)
Recommended reading for this discipline:
[1] Firestein and Kelley's Textbook of Rheumatology 2-Volume Set, 11 th edition (2020)

Unit VI Key questions covered in lesson 1 Upper and lower GI bleeding: aetiology; diagnostic testing by clinical diagnosis (complete blood count, PT/PTT, stool examination, fecal occult blood, liver function tests, H. pylori test); acid-peptic disease (including Helicobacter pylori): indications, pharmacology and adverse effects of pharmacotherapy.
1. Differential diagnosis of duodenum and stomach gastritis
2. Ambulatory treatment of patients
3. Interpreted lab.tests (CBC, urine tests, CRP, biochemical tests, H.pylori test etc.)
4.Interpreted instrumental examination (Chest X-ray, X-ray of colons with barium, ECG, abdominal ultrasonography, endoscopy)

Unit VI Key questions covered in lesson 2: Cholelithiasis and cholecystitis: pathophysiology, clinical evolution and complications; diagnostic testing (CBC, bilirubin, liver function tests, hepatitis serology, ascitic fluid analysis).
1. Differential diagnosis of IBD, disease gall bladder
2. Ambulatory treatment of patients
3. Interpreted lab.tests (CBC, urine tests, CRP, biochemical tests, stool test.)
4.Interpreted instrumental examination (Chest X-ray, X-ray of colons with barium, ECG, abdominal ultrasonography, endoscopy)
Recommended reading for this discipline:
[1] Evidence-Based, Gastroenterology and Hepatology. Fourth Edition. EDITED BY John W. D. McDonald. Brian G. Feagan. Rajiv Jalan. Peter J. Kahrilas (2019)

Unit VI Key questions covered in lesson 3: Acute and chronic diarrhea: aetiology (infectious and non-infectious causes); differentiation of Crohn's disease and ulcerative colitis by clinical presentation; pharmacotherapy in chronic diarrhea including immunotherapy—indications, pharmacology and adverse effects.
1. Differential diagnosis of Crohn's disease
2. Ambulatory treatment of patients
3. Interpreted lab.tests (CBC, urine tests, CRP, biochemical tests, stool test.)

4.Interpreted instrumental examination (Chest X-ray, X-ray of colons with barium, ECG, abdominal ultrasonography, endoscopy)

Recommended reading for this discipline:

[1] Evidence-Based, Gastroenterology and Hepatology. Fourth Edition. EDITED BY John W. D. McDonald. Brian G. Feagan. Rajiv Jalan. Peter J. Kahrilas (2019)

Unit VI Key questions covered in lesson 4: Infective (viral) hepatitis: epidemiology, microbiology, immunology and clinical evolution; cirrhosis of the liver and portal hypertension: pathophysiology, clinical evolution and complications (ascites, spontaneous bacterial peritonitis, hepatorenal syndrome, hepatic encephalopathy, acute GI bleed, hepatocellular carcinoma); management of hepatitis, cirrhosis, portal hypertension and related complications.

1. Differential diagnosis of hepatitis
2. Ambulatory treatment of patients
3. Interpreted lab.tests (CBC, urine tests, biochemical tests,)
4.Interpreted instrumental examination (Chest X-ray, X-ray of colons with barium, ECG, abdominal ultrasonography, endoscopy)

Recommended reading for this discipline:

[1] Evidence-Based, Gastroenterology and Hepatology. Fourth Edition. EDITED BY John W. D. McDonald. Brian G. Feagan. Rajiv Jalan. Peter J. Kahrilas (2019)

Unit VII Key questions covered in lesson 1: Glomerular diseases: definition and classification; glomerulonephritis—etiology, pathogenesis, mechanisms of glomerular injury, pathology, distinguishing features and clinical manifestations.

1. Differential diagnosis of kidney disease
2. Ambulatory treatment of patients
3. Interpreted lab.tests (CBC, urine tests, CRP, KFT)
4. Interpreted instrumental examination (Chest X-ray, X-ray of kidney, urogramm, ECG, ultrasonography of kidney, biopsy of kidney)

Recommended reading for this discipline:

[1] KDIGO 2017 clinical practice guiduideline update for the diagnosis, evaluation, prevention, and treatment of chronic EASE –MINERAL and bone disorder (CKD-MBD)

Unit VII Key questions covered in lesson 2: Acute and chronic pyelonephritis and reflux nephropathy: etiology, pathogenesis, pathology, laboratory findings, distinguishing features, progression and complications.

1. Differential diagnosis of kidney disease
2. Ambulatory treatment of patients
3. Interpreted lab.tests (CBC, urine tests, CRP, KFT)
4. Interpreted instrumental examination (Chest X-ray, X-ray of kidney, urogramm, ECG, ultrasonography of kidney, biopsy of kidney)

Recommended reading for this discipline:

[1] KDIGO 2017 clinical practice guiduideline update for the diagnosis, evaluation, prevention, and treatment of chronic EASE –MINERAL and bone disorder (CKD-MBD)

Unit VII Key questions covered in lesson 3: Chronic kidney disease (CKD): etiology and staging; uremia—pathophysiology and clinical findings; supportive therapy in CKD (diet, antihypertensives, glycemic therapy, dyslipidemia, anemia, hyperkalemia, hyperphosphatemia, secondary hyperparathyroidism).

2. Ambulatory treatment of patients
3. Interpreted lab.tests (CBC, urine tests, CRP, KFT)
4. Interpreted instrumental examination (Chest X-ray, X-ray of kidney, urogramm, ECG, ultrasonography of kidney, biopsy of kidney)

Recommended reading for this discipline:

[1] KDIGO 2017 clinical practice guiduideline update for the diagnosis, evaluation, prevention, and treatment of chronic EASE –MINERAL and bone disorder (CKD-MBD)

Unit VIII Key questions covered in lesson 1: Diabetes: definition and classification; diagnostic and severity assessment—systematic clinical examination (skin, peripheral pulses, blood pressure, fundus, detailed foot exam: pulses, neuropathy, deformities, injuries); laboratory evaluation for diagnosis (glucose tests, oral glucose tolerance test, HbA1c, urinary microalbumin, ECG, electrolytes, ABG, ketones, renal function tests, lipid profile); pharmacologic therapies—indications, contraindications, adverse reactions and drug interactions.

1. Differential diagnosis of diabetis

2. Ambulatory treatment of patients
3. Interpreted lab.tests (CBC, urine tests, sugar of serum, hormones of thyroid gland, ferritin of serum etc.)
4. Interpreted instrumental examination (Chest X-ray, X-ray of kidney, urogramm, ECG, ultrasonography of kidney, biopsy of kidney)

Recommended reading for this discipline:

[1] Principles and practice of Medicine / editor- in -chief, Davidson 's 22th ed.- Churchil Livingstone, 2014-1313 p.

Unit VIII Key questions covered in lesson 2: Thyroid diseases: hypothyroidism and hyperthyroidism—epidemiology, pathogenesis, role of iodine deficiency and autoimmunity; differential diagnosis based on clinical presentation; pharmacology of thyroxine and antithyroid drugs—indications, adverse reactions, interactions; management of thyrotoxicosis—indications for thionamide therapy, radioiodine therapy and surgery.

1. Differential diagnosis of Thyroid diseases
2. Ambulatory treatment of patients
3. Interpreted lab.tests (CBC, urine tests, sugar of serum, hormones of thyroid gland, ferritin of serum etc.)
4. Interpreted instrumental examination (Chest X-ray, X-ray of kidney, urogramm, ECG, ultrasonography of kidney, biopsy of kidney)

Recommended reading for this discipline:

[1] Principles and practice of Medicine / editor- in -chief, Davidson 's 22th ed.- Churchil Livingstone.

Unit VIII Key questions covered in lesson 3: Anemia: definition and classification based on red blood cell size and reticulocyte count; diagnostic approach to determine etiology; replacement therapy with iron, vitamin B12 and folate.

1. Differential diagnosis
2. Ambulatory treatment of patients
3. Interpreted lab.tests (CBC, urine tests, sugar of serum, hormones of thyroid gland, ferritin of serum etc.)
4. Interpreted instrumental examination (Chest X-ray, X-ray of kidney, urogramm, ECG, ultrasonography of kidney, biopsy of kidney)

Recommended reading for this discipline:

[1] Principles and practice of Medicine / editor- in -chief, Davidson 's 22th ed.- Churchil Livingstone.

Methodological instructions for the implementation of independent work on the discipline

To perform independent work, students need to reinforce their knowledge materials from lectures, skills from practical classes and cases. And study how use guidelines\books to different disorders.