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

SYLLABUS

Early diagnosis of cardiovascular disease (elective course)
2026-2027 academic year
for students of medical faculty
5rd course 10 semesters, groups 1-47
2 credits (60 h, including auditorial 32 h, independent work – 28 h)

Lecturer: Shchelokov Ruslan
Email: shc.ruslan@gmail.com

Venue: Fhuchika st.34, Vedanta

Practical classes: Shchelokov Ruslan
0709106408 (WhatsApp)
Email: shc.ruslan@gmail.com
Fhuchika st.34, Vedanta

Kalzhigitova Baktygul Ibragimovna
0771880460(WhatsApp)
Email: dr.baktygul@mail.ru
Alybaeva st.96

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: mastering the academic discipline early diagnosis of cardiovascular diseases in outpatient practice consists of mastering the knowledge of the work of a clinic doctor, the skills and abilities of early diagnosis, treatment and prevention of cardiovascular diseases in an outpatient service.

After study of the discipline the student must:

Knowledge:

- the normal and causes of pathological results of physical, clinical, laboratory, functional and instrumental examinations.
- basic methods of treatment, rehabilitation and prevention of the most common diseases in patients of various age groups, based on an understanding of the pathophysiological mechanisms of the development of symptoms and syndromes

Skill:

- Group disease syndromes into nosological forms based on methods of clinical, laboratory and functional examination of adults for the diagnosis of diseases and pathological processes.
- Conduct syndromic analysis of information about the specifics of damage to organs and systems in the most common nosological forms and, based on reliable diagnosis of diseases, provide practical recommendations on the use of pathogenetically based principles and methods of treatment, rehabilitation and prevention.

Pre-requisites.

1. **N**ursing
2. Propedtherapy
3. Module cardiovascular disease
3. Internal disease

Post-requisites.

1. Family medicine
2. State exam

THEMATIC PLAN OF LECTURES

№	Theme of lecture	Hours	Date
1.	New methods of diagnosis of coronary artery disease	2	According to schedule
2.	New approaches to the differential diagnosis of dyslipidemia and hypercholesterolemia	2	According to schedule5
3.	Early diagnosis of complications of coronary artery disease in an outpatient management.	2	According to schedule
4.	Early diagnosis and outpatient treatment of hypertension.	2	According to schedule
5.	Early diagnosis and treatment of hypertensive crises at the outpatient management.	2	According to schedule
6.	ECG diagnosis of arrhythmias	2	According to schedule
	Total:	12	

THEMATIC PLAN OF PRACTICAL CLASSES

№	Theme of practical class	Hours	Date
1.	Choosing and interpretation a lipid profile and identification the desirable lipid profile in the clinical context	2	According to schedule
2.	New approaches to the differential diagnosis of dyslipidemia and hypercholesterolemia	2	According to schedule
3.	The pathogenesis natural history, evolution and complications of atherosclerosis and IHD	2	According to schedule
4.	Unit 1	2	According to schedule
5.	Early diagnosis and outpatient treatment of hypertension.	2	According to schedule

6.	Recognizing, prioritizing and management hypertensive emergencies	2	According to schedule
7.	ECG diagnosis of a normal heart. WPW syndrome.	2	According to schedule
8.	ECG diagnosis of arrhythmias	2	According to schedule
9.	ECG of cardiac conduction disturbances	2	According to schedule
10.	Unit 2	2	According to schedule
	Total:	20	

THEMATIC PLAN OF INDEPENDENT WORK OF STUDENTS

Unit №	Theme of independent work	Hours	Date
1	Risk of e-cigarette use on cardiovascular health in patients with CCD.	4	
1	Diet and heart disease risk	4	
1	Management of complications of acute coronary syndromes including arrhythmias, shock, LV dysfunction, papillary muscle rupture and pericarditis	4	
2	Cognitive Decline, Dementia and Hypertension.	4	
2	Resistant Hypertension: diagnosis, evaluation, and treatment	4	
2	Nocturnal arrhythmias, diagnosis, management	4	
2	AF Catheter Ablation. Complications.	4	
	Total:	**28**	

Recommended reading for the discipline:

1. Basic:

1. Kumar and Clark 's Clinical Medicine / Elesevier, 2013
2. Kumar and Clark 's Clinical Medicine / Elesevier, 2018

2. Additional:

1. World Health Organization. HEARTS Technical Package: Cardiovascular disease management at primary health care level. Geneva: WHO; 2023.
2. Mitchell R, et al. Cardiovascular Pathology: High-Yield Study Guide for Medical Students. Lecturio GmbH; 2021.
3. Artificial Intelligence for Early Diagnosis of Cardiovascular Diseases: A Review of Current Methods and Future Perspectives. Diagnostics. 2024;14(3):288.

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	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 Key questions covered in lesson 1: Choosing and interpretation a lipid profile and identification the desirable lipid profile in the clinical context

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, markers of MI)
5. Interpreted instrumental examination (Chest X-ray, ECG)

Recommended reading for this discipline:

[1] Principles of Internal Medicine / editor- in- chief, TR Harrison / Harrison 's 16 th ed., V.2.-International edition , 2005
[2] Principles and practice of Medicine / editor- in -chief, Davidson 's 22 th ed.- Churchil Livingstone, 2014
(Firestein and Kelley's Textbook of Rheumatology 2-Volume Set, 11 th edition (2020))

Unit I Key questions covered in lesson 2: Algorithm for examining a patient with suspected atherosclerosis
1. Risk factors for the development of atherosclerosis
3. Hospitalization criteria's
4. Interpreted lab.tests (CBC, urine tests, CRP, , KFT, biochemical tests)
Recommended reading for this discipline:
[1] Principles of Internal Medicine / editor- in- chief, TR Harrison / Harrison 's 16 th ed., V.2.-International edition , 2005
[2] Principles and practice of Medicine / editor- in -chief, Davidson 's 22 th ed.- Churchil Livingstone, 2014

Unit I Key questions covered in lesson 3: The pathogenesis natural history, evolution and complications of atherosclerosis and IHD
1. Ambulatory treatment of patients with complications of CAD
2. Hospitalization criteria's
3. Interpreted lab.tests (CBC, urine tests, sputum test, CRP, LFT, KFT etc.)
4. Interpreted instrumental examination (Chest X-ray, ECG, ECO-ECG, MRI)
Recommended reading for this discipline:
[1] Kumar and Clark 's Clinical Medicine / Elesevier, 2013
[2] Kumar and Clark 's Clinical Medicine / Elesevier, 2018

Unit I Key questions covered in lesson 4: Unit control
1. Differential diagnosis of ischemic heart disease
2. Ambulatory treatment of patients with stable and unstable angina pectoris
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 of Internal Medicine / editor- in- chief, TR Harrison / Harrison 's 16 th ed., V.2.-International edition , 2005
[2] Principles and practice of Medicine / editor- in -chief, Davidson 's 22 th ed.- Churchil Livingstone, 2014

Unit I Key questions covered in lesson 5: Early diagnosis and outpatient treatment of hypertension
1. Early diagnosis of essencial and secondary hypertension
2. Ambulatory treatment of patients
3. Hospitalization criteria's
4. Interpreted lab.tests (CBC, urine tests, CRP, LFT, KFT, cholesterol, triglycerides,lipid profile
5. Interpreted instrumental examination (Chest X-ray, ECG, abdominal ultrasonography)
Recommended reading for this discipline:
[1] Principles of Internal Medicine / editor- in- chief, TR Harrison / Harrison 's 16 th ed., V.2.-International edition , 2005
[2] Principles and practice of Medicine / editor- in -chief, Davidson 's 22 th ed.- Churchil Livingstone, 2014

Unit I Key questions covered in lesson 6: Recognizing , prioritizing and management hypertensive emergencies
1. Ambulatory treatment of patients withn hypertension crisis.
2. Hospitalization criteria's
4. Interpreted lab.tests (CBC, urine tests, CRP, LFT, KFT, cholesterol, triglycerides)
5. Interpreted instrumental examination (Chest X-ray, ECG, abdominal ultrasonography)
Recommended reading for this discipline:
[1] Principles of Internal Medicine / editor- in- chief, TR Harrison / Harrison 's 16 th ed., V.2.-International edition , 2005
[2] Principles and practice of Medicine / editor- in -chief, Davidson 's 22 th ed.- Churchil Livingstone, 2014

Unit I Key questions covered in lesson 7: ECG diagnosis of a normal heart. WPW syndrome.
1. Treatment of patients with WPW-syndrome
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 of Internal Medicine / editor- in- chief, TR Harrison / Harrison 's 16 th ed., V.2.-International edition , 2005

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

Unit I Key questions covered in lesson 8: ECG diagnosis of arrhythmias

1. 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 of Internal Medicine / editor- in- chief, TR Harrison / Harrison 's 16 th ed., V.2.-International edition , 2005

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

Unit I Key questions covered in lesson 9: Unit control

1. Treatment patients with hypertensions, acute coronary syndrome, cardiomyopaty. Emergency treatment of patients with arrhythmias, MI.
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)

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.