MINISTRY OF HEALTH OF UKRAINE

Kharkiv National Medical University

Department of Internal Medicine No. 2, Clinical Immunology and Allergologynamed afterаcademician L.T.Malaya

Area of knowledge 22 “Health”

Specialty 222 “Medicine”

Educational-professional program Medicine of the second (Master's) level of higher education

**SYLLABUS OF EDUCATIONAL DISCIPLINE**

**“CARDIOLOGY WITH RHEUMATOLOGY"**

**for 6th year students**

**Profile: Internal Medicine**

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| The curriculum was approved at a meeting of the department of internal medicine № 2, clinical immunology and allergology named after academician L.T. Malaya  Protocol of  “\_28\_”\_august\_2020\_\_\_ year № 23  Head of the department  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Professor Kravchun P. G.  “ | Approved by the methodical commission of KNMU on the problems of professional training of disciplines of therapeutic profile  Protocol of  “\_31\_”\_\_ august \_\_\_\_\_\_2020\_\_\_ года № 1\_\_  Chairman  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Professor Kravchun P.G.  “\_\_\_\_\_”\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_20\_\_\_\_ year |

**EDUCATIONAL DISCIPLINE “CARDIOLOGY WITH RHEUMATOLOGY”**

**Syllabus elaborated by:** P.G. Kravchun, Head of the Department of Internal Medicine No.2, Clinical Immunology and Allergologynamed afterаcademician L.T.Malaya, Doctor of Medical Sciences, Professor

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Information about teachers

Doctor of Medical Sciences, Professor PavloHryhorovychKravchun, specialist in therapy, cardiology, clinical immunology, allergology

Doctor of Medical Sciences, Professor OleksiyMykolayovychShelest, specialist in therapy, cardiology

Candidate of Medical Sciences, Professor, MykhailoIvanovychKozhyn, specialist in therapy, cardiology

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Candidate of Medical Sciences, Associate Professor SvitlanaKrapivko, specialist in therapy, cardiology

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Information about consultations.Offline consultations: schedule and venue according to the schedule of the department. Online consultations: by prior arrangement with the teacher

Locationlecture room and classrooms of the Department of Internal Medicine No.2, Clinical Immunology and Allergologynamed afterаcademician L.T.Malayaon the basis of CNE“City Clinical Hospital No.27”KhCR (41 Pushkinskaya Street).

Class time: Monday, Tuesday, Wednesday, Thursday, Friday according to the schedule.

Typeofcontrol - differentiatedcredit.

**Discipline information**

**1. Description of the discipline**

Year:6th

Specific semester / academic year XI-XII

The volume of the discipline: ECTS credits - 4, a total of 120 hours, of which practical classes - 80 hours, IWS - 40 hours.

Type of control –grading test .

The elective course “Cardiology with Rheumatology” for 6th year students involves students studying the basic issues of cardiology and rheumatology with an emphasis on acquiring skills of history taking, physical examination, differential diagnosis, basic treatment and prevention of cardiovascular and joint diseases, disorders of connective tissue in a therapeutic clinic.

Cardiology and rheumatology are one of the basic disciplines in the training of doctors of any profile, studying the patterns and features of pathogenesis, clinical course of cardiovascular and connective tissue diseases using an interdisciplinary approach to their treatment, as well as rehabilitation processes after severe pathological conditions and main ways and methods of their prevention.

Discipline page in the Moodle system - Department of Internal Medicine No.2, Clinical Immunology and Allergologynamed afterаcademician L.T.Malaya

**2. The purpose of studying** the elective discipline “Cardiology with Rheumatology” is to acquire and deepen knowledge, skills, abilities and other competencies in cardiology and rheumatology, necessary in professional activities, which are established on the basis of educational and professional program.

**The main objectives** of the study of the elective discipline “Cardiology with Rheumatology” are:

• training of higher education students with the formation of skills for solving professional problems in accordance with the types of professional activities (preventive, diagnostic, therapeutic, rehabilitation);

• formation of skills of communication with the patient, carrying out of full range of diagnostic and medical actions according to clinical protocols of management of patients at hospital and out-patient stages;

• development of skills of interpretation of results of routine and special laboratory and instrumental methods of research in cardiology and rheumatology;

• formation of skills of statement, substantiation and formulation of the diagnosis, drawing up of the plan of inspection of patients, definition of tactics of their conducting;

• formation of skills to carry out prevention, treatment and rehabilitation of the patient, to appoint and directly carry out treatment of patients in hospital and outpatient conditions;

• formation of skills of registration of medical history and ambulatory card with the statement in them of all basic sections, substantiation of the clinical diagnosis, the plan of inspection and treatment, definition of working capacity and indications for hospitalization, keeping diaries and registration of stage epicrisis at work with cardiac and rheumatological patients.

**3. The status of the discipline** - elective, the format of the discipline - blended (combination of traditional form of classroom learning with elements of e-learning on the Moodle, ZOOM, Google Meet platforms), face-to-face and distance counseling.

**4. Teaching methods**. Types of educational activities of students according to the curriculum are: a) practical classes, b) independent work of students (IWS).

Thematic plans of practical classes and IWS ensure the implementation in the educational process of all topics included in the discipline.

Teachers ensure that each student receives the necessary competence in the following areas: questioning the patient, physical examination, oral report, making diagnostic decisions and determining treatment tactics (critical thinking), filling out documentation.

**5. Recommended references**

**Basic**

1. Diagnosis, threatmentand prevention of major cardiovascular, muskuloskeletor and connective tissue diseases : in 3 vol. / O.M. Bilovol, P.G. Kravchun, G.Yu. Titova [et al.] – Kharkiv : V/N. KarazinKharkiv National University, 2017. – Vol. 1 – 228 p.

2. Diagnosis, threatment and prevention of major cardiovascular, muskuloskeletor and connective tissue diseases : in 3 vol. / O.M. Bilovol, P.P. Kravchun, P.G. Kravchun [et al.] – Kharkiv : V/N. KarazinKharkiv National University, 2017. – Vol. 3 – 160 p.

3. Jameson J. L., Fauci A.S., Kasper D. L., Hauser S. L., Longo D. L., Loscalzo J. Harrison's Manual of Medicine, 20th edition. Palatino LT Std by Cenveo Publisher Services, USA, 2018–211 p.

**6. Prerequisites and co-requisites of the discipline**

Prerequisites: human anatomy, medical and biological physics, pathomorphology, pathophysiology, propaedeutics of internal medicine, pharmacology, clinical pharmacology.

Co-requisites: surgery, in particular cardiac surgery, obstetrics, ophthalmology, dermatology, immunology.

**7. Learning outcomes:** formation in applicants of

- ability to effectively use knowledge of etiology, pathogenesis, presentation, features of the course and possible complications, modern methods of clinical, laboratory, instrumental examination of patients and methods of treatment and indications for their use in cardiac and rheumatological practice;

- ability to independently master new knowledge and update and integrate acquired knowledge in cardiology and rheumatology;

- ability to assess the role of new approaches to diagnosis and treatment in cardiac and rheumatological practice.

**Thecontentofthediscipline**

**Topicsofpracticalclasses**

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| --- | --- | --- |
| **Topic number** | **Topic** |  |
| 1. | Managementof a patientwithhypertension | 5 |
| 2. | Managementof a patientwithchronic (recurrent) chestpain | 5 |
| 3. | Managementofa patientwithacutechestpain | 5 |
| 4. | Managementof a patientwithcardiacarrhythmias | 5 |
| 5. | Managementof a patientwithcardiacconductiondisorders | 5 |
| 6. | Managementof a patientwithedemasyndrome | 5 |
| 7. | Managementof a patientwithshortnessofbreath | 5 |
| 8. | Managementof a patientwithpulmonaryhypertensionandpulmonaryembolism | 5 |
| 9. | Managementof a patientwithcardiomegaly | 5 |
| 10. | Managementof a patientwithheartmurmur | 5 |
| 11. | Managementof a patientwitharterialhypotensionand short-termlossofconsciousness (syncope) | 5 |
| 12. | Managementof a patientwithbackandlimbpain | 5 |
| 13. | Managementof a patientwithjointsyndrome | 5 |
| 14 | Managementof a patientwithpurpura | 5 |
| 15. | Managementof a patientwithfever | 5 |
| 16. | Management of a patient with weight loss | 5 |
| Total | | 80 |

**Independent work**

|  |  |  |
| --- | --- | --- |
| Class number | Topic | Number of hours |
| 1. 1 | Preparationfor a practicallessononthetopicNo.1 "Managementof a patientwithhypertension".  - Improvingthemethodofregistrationandinterpretationof ECG, bloodpressuremeasurementandinterpretationoftheobtaineddataonthetopic.  - Improvingtheinterpretationoftheselaboratorymethods (bloodcreatinine, glomerularfiltrationrate, bloodelectrolytes). | 2.5 |
| 1. 2 | Preparationfor a practicallessononthetopicNo.2 "Managementof a patientwithchronic (recurrent) chestpain".  - Improvingtheinterpretationof ECG andtestresultswithdosedexerciseonthetopic.  - Improvingtheinterpretationoftheresultsoflaboratorymethodsofexamination (bloodlipidspectrum). | 2.5 |
| 1. 3 | Preparationfor a practicallessononthetopicNo.3 "Managementofa patientwithacutechestpain".  - Improvingtheinterpretationof ECG onthetopic.  - Improvingtheinterpretationofthedataof X-rayexaminationofthechestonthetopic.  - Improvingtheinterpretationoftheresultsoflaboratorymethodsofexamination (biochemicalmarkersofmyocardialnecrosis, coagulogram, D-dimer). | 2.5 |
| 1. 4 | Preparation for a practical lesson on the topic No.4 "Management of a patient with cardiac arrhythmia".  - Improving the interpretation of the ECG in cardiac arrhythmias on the topic.  - Improving the interpretation of these laboratory research methods (coagulogram). | 2.5 |
| 1. 5 | Preparation for a practical lesson on the topic No.5 "Management of a patient with impaired cardiac conduction".  - Improving the interpretation of the ECG in conduction disorders of the heart on the topic. | 2.5 |
| 1. 6 | Preparation for a practical lesson on the topic №6 "Management of a patient with edema syndrome".  - Improving the interpretation of Doppler echocardiography data on the topic.  - Improving the interpretation of laboratory data (total bilirubin and its fractions, total protein and its fractions, blood transaminases, creatinine, glomerular filtration rate). | 2.5 |
| 1. 7 | Preparation for a practical lesson on the topic No.7 "Management of a patient with shortness of breath".  - Improving the interpretation of Doppler echocardiography data on the topic. | 2.5 |
| 1. 8 | Preparation for a practical lesson on the topic No.8 "Management of a patient with pulmonary hypertension and pulmonary embolism".  - Improving the interpretation of Echo-CG data and the topic.  - Improving the interpretation of laboratory research data (coagulogram, D-dimer, arterial and venous blood gases and indicators of acid-base status of blood).  - Improving the interpretation of radiological examination of the thoracic cavity on the topic. | 2.5 |
| 1. 9 | Preparation for a practical lesson on the topic No,9 "Management of a patient with cardiomegaly"  - Improving the interpretation of Echo-CG data and X-ray examination of the thoracic cavity on the topic.  Improving the interpretation of the results of laboratory research methods (C-reactive peptide, markers of myocardial damage).  - Improving the interpretation of the ECG on the topic. | 2.5 |
| 1. 10 | Preparation for a practical lesson on the topic No.10 "Management of a patient with heart murmur".  - Improving the interpretation of Doppler echocardiography data on the topic.  - Improving the interpretation of X-ray examination of the chest on the topic. | 2.5 |
| 1. 11 | - Preparationfor a practicallessononthetopicNo.11 "Managementof a patientwithchronicheartfailure".  - ImprovingtheinterpretationofDopplerechocardiographydataonthetopic.  - Improvingtheinterpretationoftheresultsoflaboratoryresearchmethods (analysisofascitesfluid, coagulogram, bloodcreatinine, glomerularfiltrationrate, bloodelectrolytes, theconcentrationofnatriureticpeptideintheblood). | 2.5 |
| 1. 12 | Preparationfor a practicallessononthetopicNo.12 "Managementof a patientwithbackandlimbpain".  - Improvingtheinterpretationofradiologicalexaminationofthespine, chestandsacroiliacjointsonthetopic.  - Improvingtheinterpretationoftheresultsoflaboratoryresearchmethods (indicatorsofimmunestatus, HLA-B27, CPK). | 2.5 |
| 1. 13 | Preparationfor a practicallessononthetopicNo.13 "Managementof a patientwithjointsyndrome".  - Improvingtheinterpretationofradiologicalexaminationofjointsonthetopic.  - Improvingtheinterpretationoftheresultsoflaboratoryresearchmethods (synovialfluidanalysis, generalbloodtest, acutebloodcounts, uricacid, RF, anti-CCP, ANA, ds-DNA). | 2.5 |
| 1. 14 | Preparationfor a practicallessononthetopicNo.14 "Managementof a patientwithpurpura".  - Improvingtheinterpretationoftheselaboratoryresearchmethods (generalbloodtest, coagulogram, PANCA, CANCA). | 2.5 |
| 1. 15 | Preparationfor a practicallessononthetopicNo.15 "Managementof a patientwithfever".  - Improvingtheinterpretationof X-rayexaminationofthechest, ultrasoundexaminationoftheabdominalcavityonthetopic.  (generalbloodtest, generalurinetest, bacteriologicalbloodculture, ANA, ds-DNA). | 2.5 |
| 1. 16 | Preparation for a practical lesson on the topic No.16 "Management of a patient with weight loss".  - Improving the interpretation of anthropometric survey methods (measuring body weight, body mass index, estimating body weight loss, estimating body component composition).  - Improving the interpretation of laboratory data (determination of protein pools: albumin, transferrin, transthyretin, retinol-binding protein; immunological studies: absolute number of lymphocytes, skin reaction to antigen). | 2.5 |
| Total | | 40 |

**Discipline policy and values**

To achieve the goal of training and successfully complete the course, it is necessary: ​​to join the work from the first day; regularly attend practical classes, read the material in advance, before its consideration in a practical lesson; perform all necessary tasks and work every day; be able to work with a partner or in a group; ask for help and get it when you need it.

Students must not be late or miss classes; come to the department dressed in a medical gown, have changeable shoes, carry a phonendoscope, mask, gloves, notebook, pen. Prior to classes at the clinical base of the department, students must undergo a medical examination and have a health book with permission to work in a medical institution.

The use of electronic gadgets is allowed during practical classes and is not allowed during all types of control.

Academic Integrity Policy.Cheating and plagiarism in the preparation of student research papers are not allowed. The department considers inadmissible violation of academic integrity (academic plagiarism, self-plagiarism, fabrication, falsification, writing off, deception, bribery, biased evaluation), for which liability is provided in accordance with the Law of Ukraine "On Education" dated 05.09.2017 No. 2145-VІІІ. In the first lesson, teachers inform students about what exactly is considered plagiarism and how to properly conduct research.

Students with special educational needs should meet with the teacher or make an appointment before the start of classes, at the request of the student this can be done by the head of the group. If you have any questions, please contact the teacher.

To successfully complete the discipline, the student must be active during practical classes and perform the required minimum of academic work.

Students can receive additional points for individual tasks, namely a report at clinical conferences of the department, a report on an abstract in practice, a report on the patient's medical history in practice, writing abstracts, articles, participation in national competitions, a report on scientific conferences of the university, Ukraine and abroad.

The number of points accrued for different types of individual tasks depends on their scope and significance, but not more than 10 points. They are added to the amount of points earned by the student in the classroom during the current academic activity. In any case, the total amount of points for the current educational activity may not exceed 120 points.

All students must be instructed in safety, which is conducted at the beginning of the first class. The briefing is conducted by a teacher of the academic group or a responsible person, in accordance with the instructions approved by the order of KhNMU with an entry in the relevant journal.

**Evaluation policy**

The *current educational activity* is carried out and controlled by the teacher of the academic group, after students master each topic of the discipline, it is graded using a 4-point (traditional) system: "excellent", "good", "satisfactory" and "unsatisfactory".

The minimum number of points that a student must score for admission to the differentiated test - 70 points, the maximum number of points that a student can score - 120 points.

The *final semester control* is carried out after the completion of the study of the discipline in the form of a differentiated test by the teacher of the group in the last lesson.

Rules for appealing the grade. The student can appeal his positive assessment in accordance with the "Instructions for assessing the educational activities of students of KhNMU."

Elimination of academic debt.Reworking is carried out according to the schedule (daily and on Saturdays) in person or remotely, within 30 days from the date of admission free of charge; after 30 days - paid or free with the permission of the dean.

**Thelistoftheoreticalquestionsforpreparationforgrading test**

* Managementof a patientwithhypertension: algorithm sandst and ardsofdiagnosisand treatment.
* Managementof a patientwithchestpain: algorithmsandstandardsofdiagnosisandtreatment.
* Managementof a patientwithcardiacarrhythmias: algorithmsandstandardsofdiagnosisandtreatment.
* Managementof a patientwithcardiacconductiondisorders: algorithmsandstandardsofdiagnosisandtreatment.
* Managementof a patientwithshortnessofbreath: algorithmsandstandardsofdiagnosisandtreatment.
* Managementof a patientwithedemasyndrome: algorithmsandstandardsofdiagnosisandtreatment.
* Managementof a patientwithpulmonaryhypertension: algorithmsandstandardsofdiagnosisandtreatment.
* Managementof a patientwithcardiomegaly: algorithmsandstandardsofdiagnosisandtreatment.
* • Managementof a patientwithheartmurmur: algorithmsandstandardsofdiagnosisandtreatment.
* Managementof a patientwithchronicheartfailure: algorithmsandstandardsofdiagnosisandtreatment.
* Managementof a patientwithhypotension: algorithmsandstandardsofdiagnosisandtreatment.
* Managementof a patientwithbackandlimbpain: algorithmsandstandardsofdiagnosisandtreatment.
* Managementof a patientwithjointsyndrome: algorithmsandstandardsofdiagnosisandtreatment.
* Managementof a patientwithpurpura: algorithmsandstandardsofdiagnosisandtreatment.
* Managementof a patientwithfever: algorithmsandstandardsofdiagnosisandtreatment.
* Managementof a patientwithweightloss: algorithmsandstandardsofdiagnosisandtreatment.

Headofthe Department of Internal Medicine No.2,

Clinical Immunology and Allergology

named afterаcademician L.T.Malaya,

Doctor of Medical Sciences, ProfessorP.G.Kravchun