INTERNAL MEDICINE

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FOURTH YEAR OF STUDIES

2023/2024. school year

Subject:

INTERNAL MEDICINE

The course is evaluated with 24 ECTS. There are 12 hours of active teaching per week (6 hours of lectures and 6 hours of work in a small group).

TEACHERS:

ON	Name and surname	Email address	title
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COURSE STRUCTURE:

Module	**Name of the module**	**Week**	**Lectures weekly**	**Work in a small group per week**	**Teacher**
1	Cardiology Pulmology Allergology and immunology	15	6	6	Natasa Zdravkovic
2	Hematology Endocrinology Gastroenterology Nephrology Rheumatology	15	6	6	Natasa Zdarvkovic
					Σ180+180=360

EVALUATION:

The student masters the subject in modules. The grade is equivalent to the number of points won (see tables). Points are earned in three ways:

ACTIVITY DURING THE LESSON: In this way, a student can earn up to 30 points by answering 2 exam questions from that week's lessons during the last working hour in a small group, and based on demonstrated knowledge, they can acquire 0-1 points.

FINAL MODULE EXAMS: In this manner, a student can earn up to 20 points, as per the attached table.

FINAL (ORAL) EXAM: In this manner, a student can earn 50 points, 10 points on the final skills assessment and 40 points on the oral exam.

The final skills assessment involves the student taking a medical history, conducting a physical examination of the patient, interpreting findings, providing a diagnosis (differential), and suggesting a therapeutic approach (6 points). The student should describe two ECG findings (2 points) and two radiological lung images (2 points). If the student does not pass the final skills assessment, they cannot proceed to the oral part of the exam. The oral part of the exam entails the student orally answering five posed questions (each question is worth 0-8 points).

MODULE		**MAXIMUM POINTS**			
		activity during the lesson	**final module exams**	**final(oral) exam**	**Σ**
1	Cardiology Pulmology Allergology and immunology	15	10		25
2	Hematology Endocrinology Gastroenterology Nephrology Rheumatology	15	10		25
				50	50
Σ		**30**	**20**	**50**	**100**

CONSULTATIVE TEACHING: Consultations can be scheduled with the head of the subject, Assoc. Prof. Nataša Zdravković (natasasilvester@gmail.com).

The final grade is determined as follows:

In order for a student to pass the course, they must accumulate a minimum of 51 points, pass all modules, and pass the final oral exam.

To pass a module, a student must:
1. Score more than 50% of the points allocated for that module.
2. Earn more than 50% of the points designated for participation in classes within each module.
3. Pass the test for that module, meaning they have more than 50% correct answers

number of points won	grade
0 - 50	**5**
51 - 60	**6**
61 - 70	**7**
71 - 80	**8**
81 - 90	**9**
91 - 100	**10**

FINAL MODULE EXAMS

MODULE 1.

FINAL EXAM
0-10 POINTS

EVALUATION OF FINAL EXAM
The test has 40 questions
Each question is worth 0,25 point

MODULE 2.

FINAL EXAM
0-10 POINTS

EVALUATION OF FINAL EXAM
The test has 40 questions
Each question is worth 0,25 point

LITERATURE:

module	the name of the textbook	authors	publisher	the library
Cardiology Pulmology Allergology and immunology	Harrison's Principles of Internal Medicine, 20th Edition Textbook	Jameson JL, Fauci AS, Kasper DL, Hauser SL, Longo DL, Loscalzo J, eds.	McGraw Hill; 2018.	Yes
Hematology Endocrinology Gastroenterology Nephrology Rheumatology	Harrison's Principles of Internal Medicine, 20th Edition Textbook	Jameson JL, Fauci AS, Kasper DL, Hauser SL, Longo DL, Loscalzo J, eds.	McGraw Hill; 2018.	Yes

All the presentations can be found on the website of the Faculty of Medical Sciences: www.medf.kg.ac.rs

PROGRAM:

MODULE 1: CARDIOLOGY, PULMOLOGY, ALLERGOLOGY AND IMMUNOLOGY

TEACHING UNIT 1 (FIRST WEEK):

NON-INVASIVE AND INVASIVE DIAGNOSTIC PROCEDURES IN CARDIOLOGY

lectures 3 school classes	practice 3 school classes
• Electrocardiography • Cardiac radiology • Echocardiography • Stress electro and echocardiography • Nuclear cardiology • Application of computerized tomography in the diagnosis of cardiovascular diseases • Cardiac catheterization and coronary angiography **What the student needs to know:** • Types of electrocardiographic examinations and their role in diagnosing cardiovascular diseases. • Advantages of cardiac radiological examinations in diagnosing specific heart conditions. • Types of echocardiographic methods and their findings in various heart diseases. • Types of diagnostic methods in nuclear cardiology. • The role of computerized tomography in the diagnosis of cardiovascular diseases. • Indications for performing cardiac catheterization and coronary angiography	• Interpretation of electrocardiographic findings. • Interpretation of cardiac radiographic examinations. • Participation in conducting stress electrocardiographic tests (physical stress test). • Participation in interpreting results obtained from Holter electrocardiographic monitoring. • Participation in conducting echocardiographic examinations. • Analysis of indications for using nuclear medicine methods in the diagnosis of heart diseases. • Management of patients scheduled for cardiac catheterization or patients who have undergone cardiac catheterization. **What the student needs to know:** • To independently interpret electrocardiographic findings. • To independently perform electrocardiogram recordings. • To be familiar with indications for conducting echocardiographic examinations and the information obtained from different types of echocardiographic exams. • To be familiar with examination methods used in nuclear cardiology. • To be aware of indications for performing cardiac catheterization and coronary angiography.

TEACHING UNIT 2 (FIRST WEEK):

CORONARY HEART DISEASE. CHRONIC CORONARY SYNDROME

lectures 3 school classes	practice 3 school classes
• Coronary blood flow and myocardial ischemia • Metabolic and functional consequences of ischemia • Differential diagnosis of chest pain • Non-invasive diagnosis and early risk stratification in patients with stable angina pectoris • Invasive diagnosis in patients with stable angina pectoris • Medical therapy for patients with stable angina pectoris • Percutaneous coronary intervention and surgical revascularization in patients with angina pectoris **What the student needs to know**: • Mechanism of onset of stable angina pectoris in patients with myocardial ischemia. • Characteristics of angina-like chest pain and differential diagnosis of chest pain. • Non-invasive and invasive methods in the diagnosis of stable angina pectoris. • Medical therapy for patients with stable angina pectoris. • Surgical and interventional methods in the treatment of stable angina pectoris	• Management of patients with stable angina pectoris and differential diagnosis of chest pain. • Reading ECGs and interpreting non-invasive methods for the purpose of diagnosing stable angina pectoris. • Determining appropriate medical therapy for patients with stable angina pectoris. • Determining the need for percutaneous coronary intervention or surgical therapy for myocardial revascularization **What the student needs to know:** • Symptoms of stable angina pectoris and differential diagnosis of chest pain. • Interpreting ECGs and other non-invasive methods for the purpose of diagnosing stable angina pectoris. • Selecting appropriate medical therapy for treating angina pectoris.

TEACHING UNIT 3 (SECOND WEEK):

ACUTE CORONARY SYNDROME - DEFINITION, ETIOLOGY, AND PATHOGENESIS

lectures 3 school classes	practice 3 school classes
• Definition, etiology, classification, and epidemiology of acute coronary syndrome. • Basic pathoanatomical and pathophysiological mechanisms of acute coronary syndrome **What the student needs to know:** • Define acute coronary syndrome, its classification, basic etiological factors, and epidemiological principles. • Explain the pathoanatomical and pathophysiological processes involved in the onset and development of acute coronary syndrome.	• Patient management, history-taking, and examination of patients with acute coronary syndrome in the coronary and post-coronary care units. **What the student needs to know:** • Examination of patients with acute coronary syndrome. • Most common symptoms and signs in patients with acute coronary syndrome.

TEACHING UNIT 4 (SECOND WEEK):

ACUTE CORONARY SYNDROME - CLINICAL PRESENTATION, DIAGNOSIS, AND TREATMENT

lectures 3 school classes	practice 3 school classes
• Clinical presentation of acute coronary syndrome • Diagnosis and differential diagnosis • Therapeutic procedures in acute coronary syndrome	• Interpretation of laboratory analyses in patients with acute coronary syndrome • Analysis of ECG, familiarization with other diagnostic procedures in acute coronary syndrome (echocardiography, selective coronary angiography)

What the student needs to know:
• Clinical presentation of acute coronary syndrome
• Diagnosis and differential diagnosis
• Therapeutic procedures in acute coronary syndrome

• Familiarization with basic therapeutic procedures (supportive and reperfusion therapy)

What the student needs to know:
• Protocol for diagnosing acute coronary syndrome.
• Basic therapeutic protocols for managing acute coronary syndrome.

TEACHING UNIT 5 (THIRD WEEK):

CONGENITAL HEART DEFECTS

lectures 3 school classes	practice 3 school classes
• Definition, etiology, and classification of congenital heart defects. • Basic pathoanatomical and hemodynamic disturbances in congenital heart defects. • Fundamental pathoanatomical and clinical characteristics of the most common cyanotic and acyanotic heart defects. • Clinical presentation of congenital heart defects. • Diagnosis and treatment. • Therapeutic procedures (pharmacological and non-pharmacological interventions). • Prognostic factors **What the student needs to know:** • Definition, etiology, and classification of congenital heart defects. • Basic pathoanatomical and hemodynamic disturbances in congenital heart defects. • Fundamental pathoanatomical and clinical characteristics of the most common cyanotic and acyanotic heart defects. • Clinical presentation of congenital heart defects. • Typical physical findings in patients with congenital heart defects. • Fundamental diagnostic and treatment procedures for congenital heart defects. • Therapeutic procedures. • Prognostic factors and approach to adult patients with corrected congenital heart defects	• Management of patients with heart defects. • Familiarization with the basic symptomatology of patients with congenital heart defects. • Reading radiographic images of patients with congenital heart defects. • Analysis of results necessary for diagnosing congenital heart defects **What the student needs to know:** • Most common symptoms and signs in patients with congenital heart defects. • Physical examination findings in patients with congenital heart defects. • Series of diagnostic procedures necessary for establishing the diagnosis of congenital heart defects and assessing treatment options

TEACHIG UNIT 6 (THIRD WEEK):

ACQUIRED HEART DEFECTS

lectures 3 school classes	practice 3 school classes
• Definition, etiology, and classification of acquired heart defects. • Basic pathoanatomical and hemodynamic disturbances in acquired heart defects • Fundamental pathoanatomical and clinical characteristics of the most common acquired defects: mitral stenosis, mitral insufficiency, aortic stenosis, aortic insufficiency. • Clinical presentation and complications of mitral stenosis • Diagnosis and treatment of mitral stenosis • Therapeutic procedures for mitral stenosis (pharmacological and surgical treatment). • Prognostic factors for mitral stenosis • Clinical presentation and complications of mitral insufficiency. • Diagnosis and treatment of mitral insufficiency • Therapeutic procedures for mitral insufficiency (pharmacological and surgical treatment) • Prognostic factors for mitral insufficiency • Clinical presentation and complications of aortic stenosis • Diagnosis and treatment of aortic stenosis	• Management of patients with acquired heart defects • Familiarization with the basic symptomatology of patients with acquired heart defects • Familiarization with the physical findings in patients with corrected heart defects • Reading ECG findings and radiographic images of patients with acquired heart defects • Analysis of the results necessary for establishing the diagnosis of acquired heart defects **What the student needs to know:** • Most common symptoms and signs in patients with acquired heart defects • Physical examination findings in patients with acquired heart defects • Physical examination findings in patients with corrected heart defects • Series of diagnostic procedures necessary for establishing the diagnosis of acquired heart defects and assessing treatment options • Management of patients with acquired heart defects • Familiarization with the basic symptomatology of patients with acquired heart defects • Familiarization with the physical findings in patients with corrected heart defects • Reading ECG findings and radiographic images

• Therapeutic procedures for aortic stenosis (медикаментно и хируршко лечење)
- Прогностички фактори аортне стенозе

TEACHIG UNIT 12 (ШЕСТА НЕДЕЉА):

• Prognostic factors for aortic stenosis
• Clinical presentation, complications of aortic insufficiency
• Diagnosis and treatment of aortic insufficiency
• Therapeutic procedures for aortic insufficiency (medical and surgical treatment)
• Prognostic factors of aortic insufficiency
• Clinical presentation, diagnosis, complications, and treatment of mitral valve prolapse

in patients with acquired heart defects
• Analysis of results required for establishing the diagnosis of acquired heart defects

What the student needs to know:
• Definition of acquired heart defects
• Basic pathological and hemodynamic disturbances in acquired heart defects
• Basic pathological and clinical characteristics of the most common defects - mitral stenosis, mitral insufficiency, aortic stenosis, aortic insufficiency
• Clinical presentation of acquired heart defects
• Typical physical findings in patients with acquired heart defects
• Fundamental approaches in the diagnosis and treatment of acquired heart defects
• Therapeutic procedures for acquired heart defects

TEACHIG UNUT 7 (FOURTH WEEK):

ARTERIAL HYPERTENSION

lectures 3 school classes	practice 3 school classes
• Definition, etiology, and classification of arterial hypertension • Characteristics of secondary hypertension • Clinical presentation, complications, and diagnosis of arterial hypertension • Auxiliary diagnostic procedures • Malignant and resistant hypertension • Treatment of arterial hypertension (pharmacological treatment and modern non-pharmacological therapeutic procedures) • Hypertensive crisis: definition, clinical presentation, and therapeutic approach	• Management of patients with arterial hypertension • Familiarization with the basic symptomatology of patients with arterial hypertension • Familiarization with the physical findings in patients with arterial hypertension • Blood pressure measurement • Reading ECG findings and continuous ambulatory blood pressure monitoring • Analysis of results required for diagnosing arterial hypertension • Analysis of results required for diagnosing hypertensive crisis
What the student needs to know: • Definition, etiology, and classification of arterial hypertension • Characteristics of secondary hypertension • Clinical presentation, complications, and diagnosis of arterial hypertension • Auxiliary diagnostic procedures • Malignant and resistant hypertension • Treatment of arterial hypertension (pharmacological treatment and modern non-pharmacological therapeutic procedures) • Hypertensive crisis: definition, clinical presentation, and therapeutic approach	**What the student needs to know:** • Most common symptoms in patients with arterial hypertension • Blood pressure measurement • Reading ECG findings and continuous ambulatory blood pressure monitoring • Analysis of results required for diagnosing arterial hypertension • Analysis of results required for diagnosing hypertensive crisis

TEACHING UNIT 8 (FOURTH WEEK):

CARDIOMYOPATHIES AND MYOCARDITIS

lectures 3 school classes	practice 3 school classes
• Cardiomyopathies - definition and classification • Dilated cardiomyopathy • Hypertrophic cardiomyopathy • Restrictive cardiomyopathy • Myocarditis **What the student needs to know:** • Definition and classification of primary cardiomyopathies • Pathophysiological disorders and their presence in various cardiomyopathy types • Clinical presentation (symptoms and signs) of specific cardiomyopathies • Diagnostic procedures used to establish the diagnosis of different cardiomyopathy types • Differential diagnosis of primary cardiomyopathies • Treatment of primary cardiomyopathies • Clinical course and prognosis of primary cardiomyopathies • Etiology of myocarditis • Clinical presentation of myocarditis • Diagnosis/Treatment/Complications of myocarditis	• Management of patients with dilated cardiomyopathy • Interpretation of chest X-rays in patients with cardiomyopathy • Interpretation of electrocardiograms in patients with cardiomyopathy • Familiarization with basic principles of echocardiographic diagnosis of various cardiomyopathies • Understanding the principles of diagnosis and treatment of myocarditis **What the student needs to know:** • To master the methods of physical examination of patients with specific types of primary cardiomyopathies • To independently interpret electrocardiographic findings of patients with specific types of primary cardiomyopathies • To independently interpret chest X-ray findings of patients with specific types of primary cardiomyopathies • To independently interpret echocardiographic findings of patients with specific types of primary cardiomyopathies • To independently examine patients with myocarditis

TEACHIG UNIT 9 (FIFTH WEEK):

RHEUMATIC FEVER. INFECTIVE ENDOCARDITIS

lectures 3 school classes	practice 3 school classes
• Definition, etiology, epidemiology, pathological and pathophysiological mechanisms of rheumatic fever • Clinical presentation of rheumatic fever • Diagnostic procedures and differential diagnosis of rheumatic fever • Basic principles of treatment and prevention of rheumatic fever • Definition, etiology, epidemiology, pathological and pathophysiological mechanisms of disease occurrence of infective endocarditis • Clinical presentation of infective endocarditis • Diagnostic procedures of infective endocarditis • Treatment and prevention of infective endocarditis **What the student needs to know:** • Definition, etiology, epidemiology, pathological and pathophysiological mechanisms of rheumatic fever • Clinical presentation of rheumatic fever • Diagnostic procedures and differential diagnosis of rheumatic fever • Basic principles of treatment and prevention of rheumatic fever • Definition, etiology, epidemiology,	• Management of patients with valvular apparatus impairment of potential infective etiology • Familiarization with physical findings in patients with valvular apparatus impairment of potential infective etiology • Analysis of laboratory results • Diagnostic procedures for patients with valvular and pericardial impairment (ecg, chest X-ray, echocardiography with doppler) • Understanding therapeutic approaches for rheumatic fever **What the student needs to know:** • Most common symptoms and signs in patients with rheumatic disease • Most common symptoms and signs in patients with infective endocarditis • Cardiac auscultation in acquired valvular defects • Analysis of laboratory results • Analysis of ECG, chest X-ray, and ultrasound findings in patients with rheumatic fever and infective endocarditis • Basic therapeutic principles in the treatment of rheumatic fever and infective endocarditis

pathological and pathophysiological mechanisms of disease occurrence of infective endocarditis • Clinical presentation of infective endocarditis • Diagnostic procedures of infective endocarditis • Treatment and prevention of infective endocarditis	

TEACHIG UNIT 10 (FIFTH WEEK):

PERICARDIAL DISEASES. CLINICAL MANIFESTATIONS ON THE HEART DURING OTHER CONDITIONS

lectures 3 school classes	practice 3 school classes
• Definition, etiology, epidemiology, classification of pericarditis. • Pathoanatomical and pathophysiological mechanism of pericarditis development. • Clinical presentation of pericarditis. • Diagnostic procedures. • Treatment of different forms of pericarditis and pericardial tamponade. • Cardiovascular changes in systemic connective tissue diseases (systemic lupus erythematosus, rheumatoid arthritis, progressive systemic sclerosis, polymyositis, and dermatomyositis, ankylosing spondylitis). • Endocrine and nutritional heart diseases (acromegaly, hyperthyroidism, hypothyroidism, pheochromocytoma, diabetes, beriberi). • Heart changes in patients with kidney diseases (uremic cardiomyopathy, pericardial diseases, infective endocarditis, lipid metabolism disorder, and atherosclerosis). • Heart and neuromuscular disorders (progressive muscular dystrophies). • Cardiovascular system changes in hematological patients (thrombosis, hemosiderosis and hemochromatosis, anemias, malignant hematological diseases). • Cardiological issues in anesthesia and surgical interventions. **What the student needs to know:** • Definition, etiology, epidemiology, pathoanatomical, and pathophysiological mechanisms of pericarditis. • Clinical presentation of pericarditis. • Key diagnostic procedures and differential diagnosis. • Fundamental therapeutic principles for treating pericarditis. • Conditions leading to cardiovascular system changes. • Pathophysiological mechanism of cardiovascular system changes due to other diseases. • Clinical presentation of cardiovascular system changes due to other diseases. • Diagnosing cardiovascular system changes due to other diseases. • Treatment of cardiovascular system changes due to other diseases.	• Managing patients with pericarditis. • Familiarization with the physical findings in patients with pericarditis. • Analysis of laboratory results. • Diagnostic procedures for patients with pericarditis. • Understanding therapeutic approaches. • Managing patients with cardiovascular system changes due to another underlying condition. • Understanding basic cardiovascular system changes due to another underlying condition. • Familiarization with the physical findings in patients with cardiovascular system changes due to another underlying condition. • Analyzing necessary results for diagnosing cardiovascular system diseases resulting from another underlying condition. • Familiarization with fundamental principles of preoperative preparation for conducting non-cardiac surgeries in patients with cardiac conditions. **What the student needs to know:** • Most common symptoms and signs in patients with pericarditis. • Analysis of laboratory results. • Analysis of ECG, chest X-ray, and echocardiographic findings. • Fundamental therapeutic principles for treating pericarditis. • Most common potential consequences of other diseases on the cardiovascular system. • Physical examination findings in patients with cardiovascular system changes due to another underlying condition. • Series of diagnostic procedures necessary for diagnosing cardiovascular system changes resulting from diseases of other organ systems.

• Basics of preoperative preparation and postoperative monitoring of cardiac patients undergoing non-cardiac surgical interventions.

TEACHIG UNIT 11 (SIXTH WEEK):

ACUTE COR PULMONALE. PULMONARY EMBOLISM.

lectures 3 school classes

• Definition and classification of pulmonary heart disease
• Definition and etiology of acute cor pulmonale

• Pathophysiology of acute cor pulmonale
• Clinical presentation of acute cor pulmonale (non-cardiac and cardiac symptoms).
• Diagnosis and differential diagnosis of acute cor pulmonale (ECG, X-ray, ECHO, catheterization).
• Treatment of acute cor pulmonale (treating pulmonary hypertension, treating right heart failure).
• Course and prognosis of acute cor pulmonale
• Risk factors, pathogenesis, clinical presentation of pulmonary thromboembolism.
• Diagnosis and treatment of pulmonary thromboembolism.

What the student needs to know:

• Definition of acute cor pulmonale.
• Fundamental pathophysiological mechanisms of acute cor pulmonale.
• Key pathological and clinical characteristics of acute cor pulmonale.
• Clinical acquired forms of acute cor pulmonale
• Distinctive physical examination findings in patients with acute cor pulmonale
• Basic diagnostic and treatment procedures for acute cor pulmonale.
• Most significant risk factors for venous thromboembolism occurrence.
• Clinical presentation of pulmonary thromboembolism.
• Criteria for diagnosing pulmonary thromboembolism (laboratory, radiographic, ECG, scintigraphic, and pulmonary angiographic).
• Principles of treating deep venous thrombosis and pulmonary thromboembolism.

practice 3 school classes

• Managing patients with acute cor pulmonale.
• Familiarization with the primary symptoms of patients with acute cor pulmonale.
• Familiarization with the physical findings in patients with acute cor pulmonale
• Reading ECG findings and radiographic images of patients with acute cor pulmonale.
• Analysis of necessary results for diagnosing acute cor pulmonale.
• Management of patients with pulmonary thromboembolism.
• Analysis of laboratory, radiographic, electrocardiographic, scintigraphic, and pulmonary angiographic parameters for diagnosing pulmonary thromboembolism.

What the student needs to know:

• Most common symptoms and signs in patients with acute cor pulmonale.
• Physical examination findings in patients with acute cor pulmonale.
• Series of diagnostic procedures necessary for diagnosing acute cor pulmonale and determining treatment approach.
• Risk factors and clinical presentation of patients with pulmonary thromboembolism.
• Diagnostic criteria for pulmonary thromboembolism.
• Treatment of pulmonary thromboembolism.

TEACHIG UNIT 12 (SIXTH WEEK):

HEART FAILURE

lectures 3 school classes

• Definition and classification of heart failure.
• Etiological factors of heart failure (right heart, left heart, and global insufficiency).
• Fundamental pathoanatomical and hemodynamic disturbances in heart failure (right heart, left heart, and global insufficiency).
• Key pathological and clinical characteristics of heart failure (right heart, left heart, and global insufficiency).

practice 3 school classes

• Managing patients with heart failure.
• Familiarization with the primary symptoms of patients with heart failure.
• Reading electrocardiographic and radiographic images of patients with heart failure.
• Analysis of necessary results for diagnosing heart failure.

• Clinical presentation of heart failure (right heart, left heart, global insufficiency).
• Diagnosis and treatment.
• Therapeutic procedures (pharmacological and non-pharmacological interventions).
• Prognostic factors.
• Acute and chronic heart failure (definition, etiology, pathogenesis, clinical presentation, diagnosis, and treatment).

What the student needs to know:
• Definition, etiology, and classification of heart failure.
• Fundamental pathophysiological and hemodynamic disturbances in heart failure.
• Key pathological and clinical characteristics of heart failure of the right heart, left heart, and global insufficiency.
• Clinical presentation of heart failure (right heart, left heart, global insufficiency).
• Distinctive physical examination findings in patients with heart failure (right heart, left heart, global insufficiency).
• Basic diagnostic and treatment procedures for heart failure (right heart, left heart, global insufficiency).
• Therapeutic procedures.
• Prognostic factors and approach to adult patients with heart failure.

What the student needs to know:
• Most common symptoms and signs in patients with heart failure.
• Physical examination findings in patients with heart failure.
• Series of diagnostic procedures necessary for diagnosing heart failure and determining treatment approach.

TEACHIG UNIT 13 (SEVENTH WEEK):

CARDIAC RHYTHM DISTURBANCES AND ELECTROSTIMULATION

lectures 3 school classes	practice 3 school classes
• Structure of the cardiac conduction system. • Phases of the action potential. • Mechanisms of cardiac rhythm disturbances. • Diagnosis of cardiac rhythm disturbances. • Characteristics of supraventricular and ventricular cardiac rhythm disturbances. • Treatment of specific supraventricular and ventricular cardiac rhythm disturbances. • Cardiac electrostimulation. **What the student needs to know:** • Structure and function of the cardiac conduction system and the mechanism of arrhythmia occurrence. • Non-invasive diagnosis of specific supraventricular and ventricular rhythm disturbances. • Pharmacological therapy for cardiac rhythm disturbances. • Types of pacemakers and their indications for implantation.	• Management of patients with cardiac rhythm disturbances. • Interpretation of ECG and other non-invasive methods for diagnosing cardiac rhythm disturbances. • Therapeutic options in treating specific supraventricular and ventricular rhythm disturbances. • Familiarization with indications for pacemaker implantation and implantable defibrillators. **What the student needs to know:** • Symptoms and signs of cardiac rhythm disturbances. • ECG characteristics of specific cardiac rhythm disturbances. • Selection of medications and other therapeutic options in treating specific rhythm disturbances. • Ability to examine patients, interpret electrocardiographic recordings, and review radiographic images of patients with implanted pacemakers.

TEACHIG UNIT 14 (SEVENTH WEEK):

URGENT CONDITIONS IN CARDIOLOGY

lectures 3 school classes	practice 3 school classes

• Urgent conditions in cardiology (syncope, cardiogenic shock, cardiac rhythm disturbances, cardiac arrest). • Basic principles of cardiopulmonary resuscitation. • Cardiac electrostimulation. **What the student needs to know:** • Basics of rapid diagnosis and differential diagnosis of urgent conditions in cardiology. • Familiarization with algorithms for managing different forms of cardiac arrest.	• Understanding the epidemiology, etiology, and possibilities of preventing sudden cardiac death. • Familiarization with the basic principles of cardiopulmonary resuscitation – a case presentation of a successfully resuscitated patient. • Visit to the resuscitation room of the Emergency Center and familiarization with the equipment for conducting cardiopulmonary resuscitation. **What the student needs to know:** • To independently clear the airway, place an oropharyngeal tube, apply a nasal mask, use an Ambu bag. • To adopt algorithms for managing different forms of cardiac arrest.

TEACHING UNIT 15 (EIGHTH WEEK):

THE PHYSIOLOGY OF RESPIRATION. SLEEP- RELATED BREATHING DISORDERS. PULMONARY FUNCTION TESTS

lectures 3 school classes	practice 3 school classes
• Regulation of breathing • Clinical examination of lung function • Sleep- related breathing disorders **What the student needs to know:** • Pulmonary function tests • Sleep- related breathing disorders	• Practical learning how pulmonary function tests work: - spirometry - body plethysmography - diffusion capacity - pharmacodynamic tests • Practical learning how sleep-related breathing disorders are diagnosed- sleep study **What the student needs to know:** • Indications for doing pulmonary function test and sleep study • Interpretation of results of pulmonary function tests

TEACHIG UNIT 16 (EIGHTH WEEK):

BRONCHIAL ASTHMA – DEFINITION, ETIOLOGY AND PATHOGENESIS

lectures 3 school classes	practice 3 school classes
• Definition, etiology and pathogenesis of bronchial asthma **What the student needs to know:** • Definition and etiology of bronchial asthma • Risk factors that lead to beginning and exacerbation of bronchial asthma • Pathogenesis of bronchial asthma and factors that cause obstructed airflow from the lungs	• Working with patient • Recognition asthma related symptoms and physical examination **What the student needs to know:** • Most important symptoms in patient with bronchial asthma • Risk factors that lead to exacerbation of bronchial asthma • Physical examination of lung in patient with bronchial asthma

TEACHIG UNIT 17 (NINTH WEEK):

BRONCHIAL ASTHMA – CLINICAL PRESENTATION, DIFFERENTIAL DIAGNOSIS AND TREATMENT

lectures 3 school classes	practice 3 school classes

- Clinical presentation, diagnosis and differential diagnosis of bronchial asthma
- Treatment of bronchial asthma
-

What the student needs to know:

- Diagnostic algorithm
- Treatment approach according to new GINA guidelines
- Mechanismus of drug effects that are used for asthma treatment and drug administration types

- Performing pulmonary function tests (spirometry, body plethysmography, diffusion capacity for CO)
- Importance and performing bronchodilator test
- Importance and performing bronchoprovocation test
- Role of peak flow meter in diagnosis and monitoring bronchial asthma

What the student needs to know:

- Interpretation of functional test that are used for diagnosis and monitoring of bronchial asthma
- Differential diagnosis between bronchial asthma and COPD
- Treatment of patients with bronhial asthma
- Advantages of inhalation therapy

TEACHIG UNIT 18 (NINTH WEEK):

CHRONIC OBSTRUCTIVE PULMONARY DISEASE – DEFINITION, ETIOLOGY AND PATHOGENESIS

lectures 3 school classes	practice 3 school classes
• Definition, etiology and pathogenesis of COPD **What the student needs to know:** • Definition and etiology of COPD • Risk factors and pathogenesis of obstructed airflow from the lungs • Symptoms and clinical findings in COPD	• Working with patient with COPD • Recognising symptoms of COPD • Physical examination of patient with COPD **What the student needs to know:** • Risk factors that lead to COPD • Symptoms and physical examination of lung in patient with COPD

TEACHIG UNIT 19 (TENTH WEEK):

CHRONIC OBSTRUCTIVE PULMONARY DISEASE – CLINICAL PRESENTATION, DIFFERENTIAL DIAGNOSIS AND TREATMENT

lectures 3 school classes	practice 3 school classes
• Clinical presentation, diagnosis and differential diagnosis of COPD • Treatment of COPD **What the student needs to know:** • Assessing disease severity based on spirometric parameters. • Diagnostic procedures necessary for diagnosing COPD. • Therapeutic algorithm in accordance with GOLD recommendations. • Mechanism of action and types of medications used in COPD treatment. • Recognizing and treating COPD exacerbations.	• Importance and interpretation of functional tests for diagnosing COPD (spirometry, body plethysmography, diffusing capacity for CO, gas analysis). • Interpretation of chest radiography in patients with COPD. • Classification of disease severity levels. **What the student needs to know:** • Establishing the diagnosis of COPD. • Interpreting spirometric results. • Analyzing gas analysis and acid-base status. • Therapeutic approach for patients with COPD. • Recognizing and managing COPD exacerbations. • Oxygen therapy for COPD patients during exacerbations and in stable disease phase (Domiciliary Oxygen Therapy - DOT).

TEACHIG UNIT 20 (TENTH WEEK):

CHRONIC RESPIRATORY INSUFFICIENCY. CHRONIC COR PULMONALE.

lectures 3 school classes	practice 3 school classes
• Definition, pathophysiological classification, etiological factors, pathogenetic mechanisms • Stable condition and disease exacerbation, clinical manifestations, diagnostic and therapeutic procedures • Chronic cor pulmonale • Hypoventilation syndrome **What the student needs to know:** • Definition of Chronic respiratory insufficiency (CRI) and chronic cor pulmonale • Etiological factors for the onset of CRI • Pathogenetic mechanisms of CRI • Clinical presentation of CRI and chronic cor pulmonale • Diagnosis and treatment of CRI	• Management of patients with chronic respiratory insufficiency, chronic pulmonary heart, and hypoventilation syndrome • Analysis of arterial blood gas values and acid-base status • Practical understanding of treatment for stable state of chronic respiratory insufficiency - application of long-term oxygen therapy in home conditions • Practical familiarity with the principles of hospital treatment during the acute exacerbation of chronic respiratory insufficiency - application of controlled oxygen therapy, non-invasive mechanical ventilation **What the student needs to know:** • The most important symptoms and clinical signs in patients with chronic respiratory insufficiency, chronic cor pulmonale, and hypoventilation syndrome • Interpretation of results from gas analysis and acid-base status assessment • Indications and fundamental principles of administering oxygen therapy in home and hospital settings

TEACHIG UNIT 21 (ELEVENTH WEEK):

PNEUMONIA. LUNG ABSCESS. BRONCHIECTASIS.

lectures 3 school classes	practice 3 school classes
• Definition, etiology of pneumonia • Classification of pneumonia • Clinical presentation, physical examination, diagnosis of pneumonia • Treatment of pneumonia • Definition, pathophysiology, clinical presentation, and treatment of lung abscess • Definition, pathophysiology, clinical presentation, and treatment of bronchiectasis **What the student needs to know:** • The most common causative agents of pneumonia • Clinical presentation of patients with pneumonia • Diagnosis of pneumonia • Hospital-acquired pneumonia (definition and mechanism of occurrence) • Treatment of community-acquired and hospital-acquired pneumonia • Definition, etiology, clinical presentation, diagnosis, and treatment of lung abscess • Definition, etiology, clinical presentation, diagnosis, and treatment of bronchiectasis	• Management of patients with pneumonia, abscess, and bronchiectasis. • Clinical manifestations and physical examination findings in the lungs for pneumonia, abscess, and bronchiectasis. • Interpretation of chest X-rays in patients with pneumonia, abscess, and bronchiectasis. **What the student needs to know:** • Symptoms and physical examination findings in patients with pneumonia, abscess, and bronchiectasis. • Interpretation of chest radiographs in patients with pneumonia, abscess, and bronchiectasis. • Laboratory tests used for diagnosing pneumonia, abscess, and bronchiectasis. • Therapeutic approach in patients with pneumonia, abscess, and bronchiectasis.

TEACHIG UNIT 22 (ELEVENTH WEEK):

INTERSTITIAL LUNG DISEASES - ETIOLOGY AND CLASSIFICATION, DIAGNOSIS AND TREATMENT, PROGNOSTIC FACTORS.

lectures 3 school classes	practice 3 school classes

• Etiology and classification of interstitial lung diseases • Clinical presentation of interstitial lung diseases • Diagnosis and treatment • Prognostic factors **What the student needs to know:** • Etiology of interstitial lung diseases • Clinical presentation and physical examination of a patient with pulmonary fibrosis • Treatment of pulmonary fibrosis	• Approach to patients with interstitial lung diseases • Interpretation of radiographic images in patients with interstitial lung diseases • Analysis of results necessary for diagnosing interstitial lung diseases **What the student needs to know:** • The most common symptoms and signs in patients with pulmonary fibrosis • Physical findings in patients with pulmonary fibrosis • Interpretation of a radiographic image with pulmonary fibrosis and differential diagnosis based on lung radiography • Interpretation of spirometric parameters in patients with pulmonary fibrosis

TEACHIG UNIT 23 (TWELFTH WEEK):

PULMONARY SARCOIDOSIS. PULMONARY TUBERCULOSIS.

lectures 3 school classes	practice 3 school classes
• Etiology and pathogenesis of pulmonary sarcoidosis • Clinical forms of sarcoidosis • Clinical presentation, diagnosis, and treatment of pulmonary sarcoidosis • Epidemiology, etiology, and pathogenesis of tuberculosis (TB) • Classification of TB • Clinical presentation, diagnosis, and treatment of TB **What the student needs to know:** • Pathogenesis of sarcoidosis • Clinical presentation of a patient with pulmonary sarcoidosis • Diagnostic approach for diagnosing pulmonary sarcoidosis • Treatment of pulmonary sarcoidosis • Etiology of tuberculosis (TB) • Pathogenesis of primary and post-primary TB • Classification of TB • Diagnosis of TB • Categories of TB patients • Treatment of patients with TB	• Management of patients with pulmonary sarcoidosis • Interpretation of radiographic images of patients with pulmonary sarcoidosis • Analysis of necessary results for diagnosing pulmonary sarcoidosis • Management of patients with pulmonary tuberculosis (TB) • Interpretation of radiographic images of patients with pulmonary TB • Differential diagnosis based on radiographic images of patients with pulmonary TB. **What the student needs to know:** • The most common symptoms and signs in patients with pulmonary sarcoidosis • Physical examination findings in patients with pulmonary sarcoidosis • Interpretation of radiographic images with pulmonary sarcoidosis and differential diagnosis based on chest radiography • Key symptoms and signs in patients with pulmonary tuberculosis (TB) • Physical examination findings in patients with pulmonary TB • Interpretation of relevant laboratory parameters for diagnosing pulmonary TB • Description of chest radiography in patients with pulmonary TB.

TEACHIG UNIT 24 (TWELFTH WEEK):

PLEURAL EFFUSIONS

lectures 3 school classes	practice 3 school classes
• Pathogenesis of pleural effusions • Etiology of pleural effusions • Differentiation between transudates and exudates	• Management patient with pleural effusion • Reading radiographic images with pleural effusion

• Clinical presentation and diagnosis of pleural effusions **What the student needs to know:** • Most common causes of pleural effusions • Clinical presentation and physical examination findings in patients with pleural effusions • Diagnostic algorithm for establishing the diagnosis of pleural effusion	• Determining the etiology of pleural effusions based on laboratory parameters (distinguishing transudate from exudate) **What the student needs to know:** • Physical examination findings of patients with pleural effusion • Description of radiographic image with a shadow of pleural effusion • Distinguishing between transudate and exudate • Establishing a diagnosis of pleural effusion

TEACHIG UNIT 25 (THIRTEENTH WEEK):

MALIGNANT LUNG DISEASES - EPIDEMIOLOGY, RISK FACTORS, CLASSIFICATION OF BRONCHIAL CARCINOMA

lectures 3 school classes	practice 3 school classes
• Primary lung tumors (epidemiology, risk factors, classification of bronchial carcinoma) **What the student needs to know:** • Most common types of malignant lung tumors	• Management of patients with malignant lung tumors **What the student needs to know:** • Most common symptoms and signs of disease in patients with malignant lung tumors

TEACHIG UNIT 26 (THIRTEENTH WEEK):

MALIGNANT LUNG DISEASES - CLINICAL PRESENTATION, DIAGNOSIS OF BRONCHIAL CARCINOMA, TREATMENT OF BRONCHIAL CARCINOMA. SECONDARY LUNG TUMORS. PLEURAL TUMORS. INVASIVE DIAGNOSTIC PROCEDURES IN PULMONOLOGY.

lectures 3 school classes	practice 3 school classes
• Clinical presentation, diagnosis of bronchial carcinoma • Treatment of bronchial carcinoma • Secondary lung tumors • Tumors of the pleura • Invasive diagnostic procedures in pulmonology **What the student needs to know:** • Clinical presentation of patients with lung carcinoma • Establishing the diagnosis of malignant lung tumors • Types of treatment	• Familiarizing students with bronchoscopy as an invasive diagnostic procedure • Reading radiographic lung images with infiltrative shadows **What the student needs to know:** • Diagnostic procedures for establishing the diagnosis of lung carcinoma • Ability to describe infiltrative shadow on the lungs • Indications for bronchoscopy

TEACHIG UNIT 27 (FOURTEENTH WEEK):

PULMONARY EMBOLISM
ACUTE RESPIRATORY DISTRESS SYNDROME

lectures 3 school classes	practice 3 school classes
• Risk factors, pathogenesis, clinical presentation of pulmonary embolism • Diagnosis and treatment of pulmonary embolism • Risk factors, pathogenesis of ARDS (Acute Respiratory Distress Syndrome) • Clinical presentation, therapy of ARDS **What the student needs to know:** • The most significant risk factors for the occurrence of venous thromboembolism	• Management of patients with pulmonary thromboembolism • Analysis of laboratory, radiographic, electrocardiographic, scintigraphic, and pulmonary angiographic parameters for diagnosing pulmonary thromboembolism • Reading radiographic images - differential diagnosis **What the student needs to know:** • Risk factors and clinical presentation of a patient with pulmonary thromboembolism

• Clinical presentation of pulmonary thromboembolism • Criteria for diagnosing pulmonary thromboembolism (laboratory, radiographic, ECG, scintigraphic, and pulmonary angiographic) • Principles of treatment for deep venous thrombosis and pulmonary thromboembolism • Key risk factors for the development of ARDS (Acute Respiratory Distress Syndrome) • Clinical presentation and physical examination in patients with ARDS • Diagnostic procedures for diagnosing ARDS • Differences in chest radiography between cardiogenic and non-cardiogenic pulmonary edema • Principles of ARDS treatment	• Diagnostic criteria for pulmonary thromboembolism • Treatment of pulmonary thromboembolism • Clinical presentation and physical examination in patients with ARDS • Principles of ARDS treatment

TEACHIG UNIT 28 (FOURTEENTH WEEK):

MECHANISMS OF IMMUNE TISSUE DAMAGE. ATOPIC DISEASES. SYSTEMIC ANAPHYLAXIS. URTICARIA AND ANGIOEDEMA. ALLERGIC RHINITIS.

lectures 3 school classes	practice 3 school classes
• Mechanisms of immune tissue damage. • Atopic diseases. • Systemic anaphylaxis. • Urticaria and angioedema. • Allergic rhinitis. **What the student needs to know:** • Mechanisms of immune tissue damage - types of hypersensitivity reactions. • Pseudoallergic reactions. • Atopic diseases and characteristics of atopic constitution. • Definition of systemic anaphylaxis. Classification of systemic anaphylaxis based on the mechanism of onset. • Clinical presentation, differential diagnosis, treatment, and prevention of systemic anaphylaxis. • Classification, diagnosis, and treatment of urticaria and angioedema. • Allergic conjunctivitis etiopathogenesis, clinical presentation, diagnosis, and treatment.	• Presentation of a patient with systemic anaphylaxis, urticaria, or angioedema. • Learn the classification of systemic anaphylaxis based on the mechanism of onset. • Learn the clinical presentation, differential diagnosis, treatment, and prevention of systemic anaphylaxis, urticaria, and angioedema. **What the student needs to know:** • Clinical manifestations, diagnosis, and treatment of urticaria and angioedema. • Clinical presentation, differential diagnosis, treatment, and prevention of systemic anaphylaxis.

TEACHIG UNIT 29 (FIFTEENTH WEEK):

ALLERGIC REACTIONS TO DRUGS. ASPIRIN INTOLERANCE. IODINE CONTRAST AGENT INTOLERANCE. INTOLERANCE TO ANESTHETICS AND MUSCLE RELAXANTS.

lectures 3 school classes	practice 3 school classes
• Allergic reactions caused by medications. • Allergic reactions to penicillin drugs. • Aspirin intolerance. • Intolerance to iodine contrast agents. • Intolerance to local anesthetics. • Intolerance to general anesthetics and muscle relaxants. **What the student needs to know:** • Allergic reactions caused by medications. • Classification of adverse drug reactions. • Factors of sensitization related to the drug and related to the patient.	• Presentation of a patient with allergic reaction to medications, intolerance to iodine contrast agents, aspirin, or local and general anesthetics. • Learn the various forms of clinical manifestation (clinical presentation) of allergic reactions to medications, intolerance to iodine contrast agents, aspirin, or local and general anesthetics. **What the student needs to know:** • Clinical manifestations, treatment, and prevention of allergic reactions to medications.

• Diagnosis of allergic drug reactions - in vivo/in vitro tests. • Allergic reactions to penicillin drugs. • Intolerance to aspirin, intolerance to iodine contrast agents, intolerance to local anesthetics, intolerance to general anesthetics and muscle relaxants - clinical presentation, diagnosis, and treatment.	• Clinical manifestations, treatment, and prevention of reactions to intolerance to iodine contrast agents, aspirin, or local and general anesthetics.

TEACHIG UNIT 30 (FIFTEENTH WEEK):

ALLERGIC REACTIONS CAUSED BY FOOD. ALLERGIC REACTIONS TO LATEX. DRUG-INDUCED ERITEMA NODOSUM. HENOCH-SCHÖNLEIN PURPURA.

lectures 3 school classes	practice 3 school classes
• Allergic reactions caused by food. • Allergic reactions to rubber products. • Serum sickness. • Drug-induced erythema lupus. **What the student needs to know** • Allergic reactions caused by food, allergic reactions to rubber products. • Serum sickness. • Drug-induced systemic erythema lupus - etiopathogenesis, clinical presentation, diagnosis, and treatment.	• Learn about the forms of clinical manifestation of allergic reactions caused by food, diagnostic tests, and treatment. • Learn the etiology and clinical presentation of drug-induced systemic erythema lupus. • Learn the etiopathogenesis, clinical presentation, and treatment of serum sickness. **What the student needs to know:** • Forms of clinical manifestation of allergic reactions caused by food, diagnostic tests, and treatment. • Etiology, clinical presentation, and treatment of drug-induced systemic erythema lupus and serum sickness.

WEEKLY COURSE SCHEDULE

COURSE	WEDNESDAY	THURSDAY
INTERNAL MEDICINE (6+6)	**LECTURES** **10:15 - 15:30** (Hall at the Internal Clinic) **PRACTICE** **16:00 - 18:15** (Internal Clinic)	**PRACTICE** **16:00 - 18:15** (Internal Clinic)

PRACTICE (6x9 group) - according to the schedule of the department

CLASS SCHEDULE FOR INTERNAL MEDICINE

module	week	type	method unit name	teacher
1	1	**L**	Non-invasive and invasive diagnostic procedures in cardiology	Assoc. Prof. Vladimir Zdravkovic
1	1	**P**		dr: Stefan Simovic (x2) dr: Zeljko Todorović (x2) dr. Jelena Vuckovic (x2) dr. Rada Vucic dr. Miodrag Sreckovic
1	1	**L**	Coronary heart disease. Chronic coronary syndrome	Assoc. Prof. Vladimir Zdravkovic
1	1	**P**		dr: Stefan Simovic (x2) dr: Zeljko Todorović (x2) dr. Jelena Vuckovic (x2) dr. Rada Vucic dr. Miodrag Sreckovic
1	2	**L**	Acute coronary syndrome - definition, etiology, and pathogenesis	Full Prof. Vladimir Miloradovic
1	2	**P**		dr: Stefan Simovic (x2) dr: Zeljko Todorović (x2) dr. Jelena Vuckovic (x2) dr. Rada Vucic dr. Miodrag Sreckovic
1	2	**L**	Acute coronary syndrome - clinical presentation, diagnosis, and treatment	Full Prof. Vladimir Miloradovic
1	2	**P**		dr: Stefan Simovic (x2) dr: Zeljko Todorović (x2) dr. Jelena Vuckovic (x2) dr. Rada Vucic dr. Miodrag Sreckovic
1	3	**L**	Congenital heart defects	Assoc. Prof. Violeta Iric Cupic

CLASS SCHEDULE FOR INTERNAL MEDICINE

module	week	type	method unit name	teacher
1	3	**P**		dr: Stefan Simovic (x2) dr: Zeljko Todorović (x2) dr. Jelena Vuckovic (x2) dr. Rada Vucic dr. Miodrag Sreckovic
1	3	**L**	Acquired heart defects	Asst. Prof. Rada Vucic
1	3	**P**		dr: Stefan Simovic (x2) dr: Zeljko Todorović (x2) dr. Jelena Vuckovic (x2) dr. Rada Vucic dr. Miodrag Sreckovic
1	4	**L**	Arterial hypertension	Assoc. Prof. Violeta Iric Cupic
1	4	**P**		dr: Stefan Simovic (x2) dr: Zeljko Todorović (x2) dr. Jelena Vuckovic (x2) dr. Rada Vucic dr. Miodrag Sreckovic
1	4	**L**	Cardiomyopathies and myocarditis	Asst. Prof. Rada Vucic
1	4	**P**		dr: Stefan Simovic (x2) dr: Zeljko Todorović (x2) dr. Jelena Vuckovic (x2) dr. Rada Vucic dr. Miodrag Sreckovic
1	5	**L**	Rheumatic fever. Infective endocarditis	Asst. Prof. Miodrag Sreckovic
1	5	**P**		dr: Stefan Simovic (x2) dr: Zeljko Todorović (x2) dr. Jelena Vuckovic (x2) dr. Rada Vucic dr. Miodrag Sreckovic

CLASS SCHEDULE FOR INTERNAL MEDICINE

module	week	type	method unit name	teacher
1	5	**L**	Pericardial diseases. Clinical manifestations on the heart during other conditions	Asst. Prof. Miodrag Srećkovic
1	5	**P**		dr: Stefan Simovic (x2) dr: Zeljko Todorović (x2) dr. Jelena Vuckovic (x2) dr. Rada Vucic dr. Miodrag Sreckovic
1	6	**L**	Acute cor pulmonale. Pulmonary embolism	Full Prof. Goran Davidovic
1	6	**P**		dr: Stefan Simovic (x2) dr: Zeljko Todorović (x2) dr. Jelena Vuckovic (x2) dr. Rada Vucic dr. Miodrag Sreckovic
1	6	**L**	Heart failure	Full Prof. Goran Davidovic
1	6	**P**		dr: Stefan Simovic (x2) dr: Zeljko Todorović (x2) dr. Jelena Vuckovic (x2) dr. Rada Vucic dr. Miodrag Sreckovic
1	7	**L**	Cardiac rhythm disturbances and electrostimulation	Asst. Prof. Rada Vucic
1	7	**P**		dr: Stefan Simovic (x2) dr: Zeljko Todorović (x2) dr. Jelena Vuckovic (x2) dr. Rada Vucic dr. Miodrag Sreckovic
1	7	**L**	Urgent conditions in cardiology	Asst. Prof. Miodrag Sreckovic

CLASS SCHEDULE FOR INTERNAL MEDICINE

module	week	type	method unit name	teacher
1	7	**P**		dr: Stefan Simovic (x2) dr: Zeljko Todorović (x2) dr. Jelena Vuckovic (x2) dr. Rada Vucic dr. Miodrag Sreckovic
1	8	**L**	The physiology of respiration. Sleep- related breathing disorders. Pulmonary function tests	Full Prof. Ivan Cekerevac
1	8	**P**		dr Vojislav Cupurdija (x2) dr Stefan Simovic dr Zeljko Todorovic dr Jelena Zivic dr Anita Saric dr Tomislav Nikolic dr Jelena Vuckovic
1	8	**L**	Bronchial asthma – definition, etiology and pathogenesis	Full Prof. Ivan Cekerevac
1	8	**P**		dr Vojislav Cupurdija (x2) dr Stefan Simovic dr Zeljko Todorovic dr Jelena Zivic dr Anita Saric dr Tomislav Nikolic dr Jelena Vuckovic
1	9	**L**	Bronchial asthma – clinical presentation, differential diagnosis and treatment	Full Prof. Ivan Cekerevac
1	9	**P**		dr Vojislav Cupurdija (x2) dr Stefan Simovic dr Zeljko Todorovic dr Jelena Zivic dr Anita Saric dr Tomislav Nikolic dr Jelena Vuckovic

CLASS SCHEDULE FOR INTERNAL MEDICINE

module	week	type	method unit name	teacher
1	9	**L**	Chronic obstructive pulmonary disease – definition, etiology and pathogenesis	Asst. Prof Vojislav Cupurdija
1	9	**P**		dr Vojislav Cupurdija (x2) dr Stefan Simovic dr Zeljko Todorovic dr Jelena Zivic dr Anita Saric dr Tomislav Nikolic dr Jelena Vuckovic
1	10	**L**	Chronic obstructive pulmonary disease – clinical presentation, differential diagnosis and treatment	Asst. Prof Vojislav Cupurdija
1	10	**P**		dr Vojislav Cupurdija (x2) dr Stefan Simovic dr Zeljko Todorovic dr Jelena Zivic dr Anita Saric dr Tomislav Nikolic dr Jelena Vuckovic
1	10	**L**	Chronic respiratory insufficiency. Chronic cor pulmonale	Full Prof. Ivan Cekerevac
1	10	**P**		dr Vojislav Cupurdija (x2) dr Stefan Simovic dr Zeljko Todorovic dr Jelena Zivic dr Anita Saric dr Tomislav Nikolic dr Jelena Vuckovic
1	11	**L**	Pneumonia. Lung abscess. Bronchiectasis	Asst. Prof Vojislav Cupurdija

CLASS SCHEDULE FOR INTERNAL MEDICINE

module	week	type	method unit name	teacher
1	11	**P**		dr Vojislav Cupurdija (x2) dr Stefan Simovic dr Zeljko Todorovic dr Jelena Zivic dr Anita Saric dr Tomislav Nikolic dr Jelena Vuckovic
1	11	**L**	Interstitial lung diseases - etiology and classification, diagnosis and treatment, prognostic factors.	Asst. Prof Vojislav Cupurdija
1	11	**P**		dr Vojislav Cupurdija (x2) dr Stefan Simovic dr Zeljko Todorovic dr Jelena Zivic dr Anita Saric dr Tomislav Nikolic dr Jelena Vuckovic
1	12	**L**	Pulmonary sarcoidosis. Pulmonary tuberculosis	Full Prof. Ivan Cekerevac
1	12	**P**		dr Vojislav Cupurdija (x2) dr Stefan Simovic dr Zeljko Todorovic dr Jelena Zivic dr Anita Saric dr Tomislav Nikolic dr Jelena Vuckovic
1	12	**L**	Pleural effusions	Asst. Prof Vojislav Cupurdija

CLASS SCHEDULE FOR INTERNAL MEDICINE

module	week	type	method unit name	teacher
1	12	**P**		dr Vojislav Cupurdija (x2) dr Stefan Simovic dr Zeljko Todorovic dr Jelena Zivic dr Anita Saric dr Tomislav Nikolic dr Jelena Vuckovic
1	13	**L**	Malignant lung diseases - epidemiology, risk factors, classification of bronchial carcinoma	Asst. Prof Vojislav Cupurdija
1	13	**P**		dr Vojislav Cupurdija (x2) dr Stefan Simovic dr Zeljko Todorovic dr Jelena Zivic dr Anita Saric dr Tomislav Nikolic dr Jelena Vuckovic
1	13	**L**	Malignant lung diseases - clinical presentation, diagnosis of bronchial carcinoma, treatment of bronchial carcinoma. Secondary lung tumors. Pleural tumors. Invasive diagnostic procedures in pulmonology	Asst. Prof Vojislav Cupurdija
1	13	**P**		dr Vojislav Cupurdija (x2) dr Stefan Simovic dr Zeljko Todorovic dr Jelena Zivic dr Anita Saric dr Tomislav Nikolic dr Jelena Vuckovic
1	14	**L**	Pulmonary embolism. Acute respiratory distress syndrome	Full Prof. Ivan Cekerevac

CLASS SCHEDULE FOR INTERNAL MEDICINE

module	week	type	method unit name	teacher
1	14	**P**		dr Vojislav Cupurdija (x2) dr Stefan Simovic dr Zeljko Todorovic dr Jelena Zivic dr Anita Saric dr Tomislav Nikolic dr Jelena Vuckovic
1	14	**L**	Mechanisms of immune tissue damage. Atopic diseases. Systemic anaphylaxis. Urticaria and angioedema. Allergic rhinitis.	Assoc. Prof. Mirjana Veselinovic
1	14	**P**		dr Mirjana Veselinovic (x2) dr Anita Saric (x2) dr Stefan Simovic (x2) dr Zeljko Todorovic (x2)
1	15	**L**	Allergic reactions to drugs. Aspirin intolerance. Iodine contrast agent intolerance. Intolerance to anesthetics and muscle relaxants.	Full Prof Aleksandra Lucic Tomic
1	15	**P**		dr Mirjana Veselinovic (x2) dr Anita Saric (x2) dr Stefan Simovic (x2) dr Zeljko Todorovic (x2)
1	15	**L**	Allergic reactions caused by food. Allergic reactions to latex. Drug-induced eritema nodosum. Henoch-schönlein purpura.	Assoc. Prof. Mirjana Veselinovic
1	15	**P**		dr Mirjana Veselinovic (x2) dr Anita Saric (x2) dr Stefan Simovic (x2) dr Zeljko Todorovic (x2)
		FME	**FINAL MODULE EXAM 1**	
		E	**CORRECTIONAL MODULE EXAMS, DRAWING OF EXAMINATION COMMITTEE**	
		E	**FINAL SKILLS ASSESSMENT AND ORAL EXAM**	

EXAMINATION COMMITTEE FOR FINAL SKILLS ASSESSMENT AND ORAL EXAM

EXAM QUESTIONS

CARDIOLOGY

1. Acute Heart Failure (Definition, Classification, and Pathophysiology)
2. Acute Heart Failure (Clinical Presentation, Preload and Pulmonary Edema, Treatment)
3. Acute Heart Failure (Clinical Presentation, Cardiogenic Shock, Treatment)
4. Chronic Heart Failure (Definition, Classification, and Pathophysiology)
5. Chronic Heart Failure (Clinical Presentation and Treatment)
6. Atrial Arrhythmias (Atrial Flutter, Atrial Fibrillation, Definition, Etiology, Classification, Diagnosis, and Treatment)
7. Supraventricular Arrhythmias (Supraventricular Extrasystoles, Paroxysmal Supraventricular Tachycardia, Definition, Etiology, Classification, Diagnosis, and Treatment)
8. Ventricular Arrhythmias (Ventricular Extrasystoles, Ventricular Tachycardia, Definition, Etiology, Classification, Diagnosis, and Treatment)
9. Ventricular Arrhythmias (Electromechanical Dissociation and Asystole, Definition, Etiology, Classification, Diagnosis, and Treatment)
10. Supraventricular and Ventricular Arrhythmias (SA and AV Blocks, Syncopal States, Definition, Etiology, Classification, Diagnosis, and Treatment)
11. Acute Cor Pulmonale
12. Rheumatic Fever
13. Aortic Stenosis
14. Aortic Insufficiency
15. Mitral Stenosis
16. Mitral Insufficiency and Mitral Valve Prolapse
17. Congenital Heart Defects in Adults
18. Infective Endocarditis
19. Stable Angina Pectoris
20. Ischemic Heart Disease
21. Acute Coronary Syndrome (Unstable Angina Pectoris)
22. Acute Coronary Syndrome (Myocardial Infarction with ST Elevation)
23. Acute Coronary Syndrome (Myocardial Infarction without ST Elevation)
24. Complications of Acute Myocardial Infarction
25. Myocarditis
26. Dilated Cardiomyopathy
27. Hypertrophic Cardiomyopathy
28. Restrictive Cardiomyopathy
29. Pericarditis and Pericardial Tamponade
30. Peripheral Arterial Diseases
31. Arterial Hypertension
32. Hypertensive Crisis
33. Aortic Diseases

PULMOLOGY

1. Pulmonary Function Testing with Spirometry
2. Tests for Assessing Pulmonary Hyperinflation
3. Pharmacodynamic Tests and Bronchial Hyperresponsiveness
4. Bronchial Asthma
5. Principles of Bronchial Asthma Treatment
6. Chronic Obstructive Pulmonary Disease (COPD)
7. Principles of COPD Treatment
8. Chronic Cor Pulmonale
9. Lung Abscess
10. Bronchiectasis

11. Pleural Diseases
12. Pneumonias
13. Chronic Respiratory Insufficiency
14. Invasive Diagnostic Procedures in Pulmonology
15. Pulmonary Tuberculosis
16. Bronchial Tumors
17. Pleural Tumors
18. Tuberculosis Treatment
19. Pulmonary Sarcoidosis
20. Pulmonary Fibrosis
21. Acute Respiratory Distress Syndrome (ARDS)
22. Pulmonary Embolism

ALLERGOLOGY

1. Mechanisms of Tissue Immune Damage.
2. Atopic Diseases.
3. Allergic Reactions to Medications.
4. Aspirin Intolerance.
5. Iodine Contrast Media Intolerance.
6. Intolerance to Anesthetics and Muscle Relaxants.
7. Systemic Anaphylaxis.
8. Urticaria and Angioedema.
9. Allergic Rhinitis.
10. Allergic Reactions Caused by Food.
11. Allergic Reactions to Latex.
12. Drug-Induced Erythematosus Lupus.
13. Henoch-Schönlein Purpura.