



Internal medicine

1. IMPRINT	
Academic Year	2026/2027
Department	Faculty of Medicine and Dentistry
Field of study	English Dentistry Division
Main scientific discipline	Medical sciences
Study Profile	General Academic
Level of studies	Uniform MSc
Form of studies	Full time studies
Type of module / course	Obligatory
Form of verification of learning outcomes	Exam
Educational Unit / Educational Units	Department of Internal Medicine and Cardiology Lindleya 4, 02-005 Warsaw Tel: 22 502 11 44, e-mail: kchwk@wum.edu.pl

Załącznik nr 4C do Procedury opracowywania i okresowego przeglądu programów studiów
(stanowiącej załącznik do zarządzenia nr 68/2024 Rektora WUM z dnia 18 kwietnia 2024 r.)

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2. BASIC INFORMATION				
Year and semester of studies	III year; V, VI semester		Number of ECTS credits	3,5
FORMS OF CLASSES		Number of hours	ECTS credits calculation	
Contacting hours with academic teacher				
Lecture (L)		8 (8 e-learning)	0,3	
Seminar (S)		18	0,7	
Discussions (D)				
e-learning (e-L)				
Practical classes (PC)		34	1,4	

Work placement (WP)		
Unassisted student's work		
Preparation for classes and completions	25	1,1

3. COURSE OBJECTIVES

C.1.	Obtaining a student of the medical and dental faculty with the ability to conduct a medical interview and perform a physical examination of patients with the most common internal medicine problems, making diagnoses.
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4. STANDARDS OF LEARNING – DETAILED DESCRIPTION OF EFFECTS OF LEARNING

Code and number of effect of learning in accordance with standards of learning	Effects in time
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Knowledge – Graduate* knows and understands:

E.W1.	basic disorders of hormone secretion regulation, water and electrolyte balance, acid-base balance, renal, pulmonary, and hepatic function, and mechanisms of onset and effects of cardiovascular disorders, including shock
E.W2.	mechanisms leading to organ and systemic pathologies, including chronic non-communicable, infectious, metabolic, genetic and immunodeficiency diseases
E.W4.	the relationship between morphological abnormalities and the function of altered organs and systems as well as clinical manifestations and diagnostic and treatment options
E.W5.	basic methods of medical examination and the role of additional examinations in the diagnosis, monitoring, prognosis and prevention of organ and systemic disorders, with particular emphasis on their effects on oral tissues
E.W.6.	aetiopathogenesis and symptomatology of diseases of the respiratory, circulatory, hematopoietic, genitourinary, immunological, gastrointestinal, and musculoskeletal systems and endocrine glands, with particular emphasis on diseases with oral manifestations
E.W.12.	symptoms of acute abdominal diseases, poisoning, infection, and sepsis
E.W.26.	life-threatening conditions
E.W.28.	cases in which a patient should be referred to a hospital

Skills– Graduate* is able to:

E.U1.	conduct differential diagnosis of the most common diseases
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E.U2.	communicate with the patient, assess, and describe the patient's somatic and psychological state by applying the principles of professional communication
E.U3.	plan diagnostic and therapeutic procedures in the case of the most common diseases
E.U4.	interpret the results of laboratory tests
E.U9.	recognise a life-threatening risk
E.U10.	describe and recognise symptoms of shock and acute circulatory failure

5. ADDITIONAL EFFECTS OF LEARNING

Number of effects of learning	Effects of learning in time
Knowledge – Graduate knows and understands:	
K1	-
Skills– Graduate is able to:	
S1	-
Social Competencies – Graduate is ready for:	
SC1	-

6. CLASSES

Form of class	Class contents	Effects of Learning
Lecture 1.	Atherosclerosis – pathogenesis and symptoms in various locations. Principles of primary and secondary prevention of atherosclerosis. During the lecture, the process of atherosclerosis development will be discussed, with emphasis on risk factors contributing to the acceleration of the formation of atherosclerotic plaques. Additionally, issues that are used in the diagnosis and treatment of diseases resulting from atherosclerosis will be discussed	E.W2., E.W4., E.W5., E.W6., E.W26., E.U1., E.U3., E.U4.
Lecture 2.	Carbohydrate metabolism disorders - from prediabetes to the diagnosis of diabetes. The lecture will discuss the definition and etiopathogenesis of prediabetes and diabetes, including the types of the disease. Attention to the most important elements of physical and subjective examination in diagnosing diabetes and differential diagnosis, including etiology. Students will be familiarized with modern treatment of this disease.	E.W2., E.W4., E.W5., E.W6., E.W26., E.U1., E.U3., E.U4.
Lecture 3.	Acute cardiac conditions: acute coronary syndromes, acute pulmonary embolism, aortic dissection, hypertensive emergencies.	E.W1., E.W2., E.W4., E.W6., E.W12., E.W26., E.W28.,

	During the lecture, the student learns the definitions, etiopathogenesis, clinical picture, natural course and treatment of chronic and acute coronary syndromes. The current diagnostic and therapeutic path in myocardial infarction with and without ST segment elevation will be discussed.	E.U1., E.U3., E.U4., E.U9., E.U10.
Lecture 4.	Chronic and acute heart failure. Myocarditis and cardiomyopathies. Chronic heart failure is a lifestyle disease in our population, the incidence of which is constantly increasing. During the lecture, students receive information on the epidemiology, pathogenesis, and diagnosis of chronic and acute heart failure. The lecture also covers basic issues about myocarditis and cardiomyopathy.	E.W1., E.W2., E.W4., E.W6., E.W12., E.W26., E.W28., E.U1., E.U3., E.U4., E.U9., E.U10.
Lecture 5.	Cardiac arrhythmias, diagnosis and management. During the lecture, the diagnosis, differential diagnosis, treatment and clinical implications of the most important cardiac arrhythmias, both tachyarrhythmia and bradyarrhythmia, will be discussed. Elements important in dental practice will be included.	E.W1., E.W2., E.W4., E.W6., E.W12., E.W26., E.W28., E.U1., E.U3., E.U4., E.U9., E.U10.
Lecture 6.	Infective endocarditis – prevention in the dental office. The lecture discusses issues related to the epidemiology, etiology and pathogenesis of infective endocarditis. Diagnostic criteria, treatment and primary and secondary prevention will be discussed.	E.W1., E.W2., E.W4., E.W6., E.W12., E.W26., E.W28., E.U1., E.U3., E.U4., E.U9., E.U10.
Lecture 7.	Arterial hypertension and hypertensive crisis. During the lecture, arterial hypertension and two main types of hypertension will be discussed: primary and secondary. Hypertensive crisis is an emergency and requires immediate medical intervention. During the lecture, all important issues related to hypertension will be discussed, especially in the aspect of dental practice.	E.W1., E.W2., E.W4., E.W6., E.W12., E.W26., E.W28., E.U1., E.U3., E.U4., E.U9., E.U10.
Lecture 8.	Fever conditions: principles of diagnosis and treatment. The lecture presents the definitions, causes, classification and basic principles of causal and symptomatic treatment of fever, sepsis and septic shock. Reminder about the prevention of infective endocarditis.	E.W2., E.W4., E.W6., E.W12., E.W26., E.W28., E.U1., E.U3., E.U4., E.U9.
Seminar 1	Introduction to internal medicine classes. Principles of subjective and objective examination. Assessment of general condition and general symptoms. During the seminar, the organization of classes, the rules of assessment and source materials will be discussed. In addition, the general principles of interview and physical examination as well as the assessment of the general condition and general symptoms will be discussed.	E.W2., E.W5., E.U2.
Seminar 2	Clinical examination of the head and neck. Basic examination of the neurological system. During the seminar, basic issues related to the subjective and physical examination of the head and neck as well as basic information regarding neurological examination will be presented. The seminar considers the specificity of dental practice in the field of head and neck examination.	E.W2., E.W4., E.W5., E.W6., E.W26., E.W28., E.U1., E.U2., E.U4., E.U9.
Seminar 3	Respiratory system interviews. During the seminar, the student learns the definitions and etiopathogenesis of the most common respiratory symptoms. The symptomatology of the most important respiratory diseases will be discussed	E.W2., E.W4., E.W5., E.W6., E.W26., E.W28., E.U1., E.U2., E.U4., E.U9.
Seminar 4	Respiratory system examination. The seminar presents all stages of physical examination in the field of the respiratory system, starting from viewing (shape of the chest, breathing pattern, cyanosis, clubbed fingers), through palpation (breathing symmetry,	E.W2., E.W4., E.W5., E.W6., E.W26., E.W28., E.U1., E.U2., E.U4., E.U9.

	thoracic tremor), percussion (changes in percussion sound) and auscultation (additional sounds). The presentation explains the deviations of physical examination in pathological conditions: pneumothorax and the presence of fluid in the pleura, pulmonary oedema and pulmonary congestion, bronchial asthma and COPD.	
Seminar 5	Cardiovascular interviews. Discussion of important elements of the interview (symptoms, diseases in the family, previous procedures, surgeries) in the context of cardiovascular diseases. After the classes, participants will acquire knowledge about the symptoms of the most common cardiovascular diseases	E.W2., E.W4., E.W5., E.W6., E.W26., E.W28., E.U1., E.U2., E.U4., E.U9.
Seminar 6	Physical examination of the heart. During the seminar, the principles of physical examination of the heart will be discussed, including all required elements. In addition, basic deviations and the ability to recognize them will be discussed, such as heart murmurs, variable loudness of heart sounds, etc.	E.W2., E.W4., E.W5., E.W6., E.W26., E.W28., E.U1., E.U2., E.U4., E.U9., E.U10.
Seminar 7	Physical examination of the peripheral circulatory system. During the seminar, the principles of physical examination of the peripheral circulatory system (arterial and venous) will be discussed, considering all required elements. In addition, basic abnormalities and the ability to recognize them will be discussed, such as vascular sounds, heart rate abnormalities, symptoms of venous thrombosis, etc.	E.W2., E.W4., E.W5., E.W6., E.W26., E.W28., E.U1., E.U2., E.U4., E.U9., E.U10.
Seminar 8	Interviews regarding the digestive system. Discussion of the principles of collecting medical history and the main symptoms of the abdominal cavity and gastrointestinal tract. The most important definitions and clinical implications of this part of the interview will be discussed.	E.W2., E.W4., E.W5., E.W6., E.W12., E.W26., E.W28., E.U1., E.U2., E.U3., E.U9.
Seminar 9	Physical examination of the abdominal cavity. The seminar concerns physical examination of the abdominal cavity. During the seminar, students learn basic information about the physical examination of the abdominal cavity, which they use during exercises and subsequent medical work.	E.W2., E.W4., E.W5., E.W6., E.W12., E.W26., E.W28., E.U1., E.U2., E.U3., E.U9.
Seminar 10	Interviews and physical examination of the urinary system. Basic examination of the musculoskeletal system. The seminar will discuss the basic symptoms of diseases of the urinary system and musculoskeletal system. Attention will be paid to the most important elements of physical and subjective examination in differential diagnosis. Students learn about the differences related to dental diseases.	E.W1., E.W2., E.W4., E.W5., E.W6., E.W26., E.W28., E.U1., E.U2., E.U4., E.U9.
Seminar 11	Cardiological problems in patients at the dentist's office. Discussion of the most common cardiac diseases and the pharmacotherapy used and their impact on dental procedures. Management of a patient with an implanted cardiac pacemaker.	E.W2., E.W4., E.W6., E.W26., E.W28., E.U1., E.U3., E.U4., E.U9., E.U10.
Seminar 12	Chronic and acute coronary syndrome. Procedure in the dental office. During the seminar, the student learns the definitions, etiopathogenesis, clinical picture, natural course and treatment of chronic and acute coronary syndromes. The current diagnostic and therapeutic path in myocardial infarction with and without ST segment elevation will be discussed.	E.W2., E.W4., E.W6., E.W26., E.W28., E.U1., E.U3., E.U4., E.U9., E.U10.
Seminar 13	Primary and secondary hypertension. Hypertensive crisis. Arterial hypertension is a chronic disease characterized by persistently elevated blood pressure in arteries. There are two main types of	E.W1., E.W2., E.W4., E.W6., E.W26., E.W28., E.U1., E.U3., E.U4., E.U9., E.U10.

	hypertensions: primary and secondary. Hypertensive crisis is an emergency and requires immediate medical intervention. During the seminar, all important issues related to hypertension will be discussed.	
Seminar 14	Additional tests in the diagnosis of cardiovascular diseases and their interpretation. During the seminar, issues related to the diagnosis of cardiac patients will be discussed. The selection of appropriate additional tests and their interpretation will be discussed in detail.	E.W26., E.W28., E.U4., E.U9.
Seminar 15	ECG: normal recording, ischemia, heart rhythm and conduction disturbances. During the seminar, basic information about electrocardiography will be discussed: normal recording, recognition of acute ischemia and life-threatening heart rhythm and conduction disorders. selection of appropriate additional tests and their interpretation.	E.W26., E.W28., E.U4., E.U9.
Seminar 16	The most common acquired and congenital heart defects. During the seminar, the student learns the definitions, etiopathogenesis, symptomatology, natural course and treatment of the most common acquired and congenital heart defects.	E.W2., E.W4., E.W6., E.W26., E.W28., E.U1., E.U3., E.U4., E.U9., E.U10.
Seminar 17	Acute and chronic heart failure. Cardiogenic shock. Chronic heart failure is a lifestyle disease in our population, the incidence of which is constantly increasing. During the lecture, students receive information on the epidemiology, pathogenesis, and diagnosis of chronic and acute heart failure. The lecture also covers basic issues about cardiogenic shock.	E.W1., E.W2., E.W4., E.W6., E.W26., E.W28., E.U1., E.U3., E.U4., E.U9., E.U10.
Seminar 18	Venous thromboembolism. The seminar will discuss the basic symptoms of venous thromboembolism, i.e. pulmonary embolism and deep vein thrombosis of the lower limbs. Risk factors, probability scales, classification and treatment principles will be presented. Students learn important elements related to dental practice	E.W1., E.W2., E.W4., E.W6., E.W26., E.W28., E.U1., E.U3., E.U4., E.U9., E.U10.
Seminar 19	Diabetes and prediabetes – diagnosis, complications, treatment. The seminar will discuss the definition of diabetes and its division into types of disease. Attention will be paid to the most important elements of physical and subjective examination in diagnosis and differential diagnosis. Students will become familiar with the most important differences resulting from dental diseases.	E.W1., E.W2., E.W4., E.W6., E.W26., E.W28., E.U1., E.U3., E.U4., E.U9.
C1-C9 Practical training	C1-C9 - Practical classes at the patient's bedside, in the clinic and in ward laboratories. - Part 1 Exercises including history and physical examination, interpretation of additional test results, discussion and proposal of treatment and long-term care. Exercises in clinical laboratories and familiarization with the most important methods used in internal medicine practice.	E.W1., E.W2., E.W4., E.W5., E.W6., E.W12., E.W26., E.W28., E.U1., E.U2., E.U3., E.U4., E.U9., E.U10.
C10-C19 Practical training	C10-C19 - Practical classes at the patient's bedside, in the clinic and in ward laboratories. - Part 2 Exercises including history and physical examination, interpretation of additional test results, discussion and proposal of treatment and long-term care. Exercises in clinical laboratories and familiarization with the most important methods used in internal medicine practice.	E.W1., E.W2., E.W4., E.W5., E.W6., E.W12., E.W26., E.W28., E.U1., E.U2., E.U3., E.U4., E.U9., E.U10.
C20-C29. Practical training	C20-C29 - Practical classes at the patient's bedside, in the clinic and in ward laboratories. - Part 3 Exercises including history and physical examination, interpretation of additional test results, discussion and proposal of treatment and long-term	E.W1., E.W2., E.W4., E.W5., E.W6., E.W12., E.W26., E.W28., E.U1., E.U2., E.U3., E.U4., E.U9., E.U10.

	care. Exercises in clinical laboratories and familiarization with the most important methods used in internal medicine practice.	
C30-C34 Practical training	C30-C34 - Practical classes at the patient's bedside, in the clinic and in ward laboratories. - Part 4 Exercises including history and physical examination, interpretation of additional test results, discussion and proposal of treatment and long-term care. Exercises in clinical laboratories and familiarization with the most important methods used in internal medicine practice. The final 10 minutes of the last class will be devoted to students completing the Class and Academic Teacher Assessment Survey.	E.W1., E.W2., E.W4., E.W5., E.W6., E.W12., E.W26., E.W28., E.U1., E.U2., E.U3., E.U4., E.U9., E.U10.

7. LITERATURE
Obligatory
- Kumar and Clark's Clinical Medicine, 9th Edition, Parveen Kumar, Michael L Clark - Davidson's Principles and Practice of Medicine, 23rd Edition, Stuart H. Ralston, Ian Penman, Mark Strachan, Richard Hobson
Supplementary
- Macleod's Clinical Examination 14th Edition, J. Alastair Innes Anna Dover Karen Fairhurst - Evidence-Based Medicine 5th Edition, Sharon Straus Paul Glasziou W. Scott Richardson R. Brian Haynes - In Polish: Interna Szczeklika 2025/26. Mały podręcznik. Medycyna Praktyczna, Kraków (lub alternatywnie starsze wydania)

8. VERIFYING THE EFFECT OF LEARNING		
Code of the course effect of learning	Ways of verifying the effect of learning	Completion criterion
E.W1., E.W2., E.W4., E.W5., E.W6., E.W12., E.W26., E.W28., E.U1., E.U2., E.U3., E.U4., E.U9., E.U10.	During classes, assistants check knowledge of the applicable material from indicated sources of knowledge and textbooks and constantly assess practical skills in clinical examinations. On the last day of classes, a final test - a test colloquium with the awarding of grades takes place after the end of each block of classes in semester 5 and semester 6 (the grade for the final report after the third year is the grade from the test colloquium after semester 6). The final examination in the subject takes place in the summer examination session after the end of classes in the fourth year of studies.	Attendance at all classes. Passing a test colloquium and assigning grades. The test consists of 9 single-choice questions (0 or 1 point) and 3 descriptive questions (0, 0.5, 1, 1.5 or 2 points). The maximum number of possible points to obtain is 15. Test colloquium grades: 0-7.5 points n/a (2.0) 8.0-8.5 points dst(3.0) 9-9.5 points dgood (3.5) 10-11.5 points good (4.0) 12-13.5 points pgood (4.5) 14-15 points very good (5.0)

9. ADDITIONAL INFORMATION

Classes are held according to the schedule from the Dean's Office in the Clinic's seminar room. Lindleya 4, pavilion 3, 2nd floor). Lectures using the e-learning platform eWUM - lectures on the e-learning platform are not delivered live online, they are in the form of recorded videos that can be listened to at any time during classes. Confirmed listening to the lectures should take place before taking the final test. The exercises take place on the departments of the Clinic, in the laboratories or in the outpatient clinic. Listening to all lectures and attending all seminars and classes is obligatory. Absences require credit by completing the outstanding material with the teaching assistant, preparing a presentation on a given topic, and/or makingp classes with another group. Before starting classes, students leave their outerwear in the clinic's student locker room. Students are required to change their shoes, have medical coats, and stethoscopes. Credit for classes is based on attendance and a test, which takes place on the last day of classes in the training block. The final 10 minutes of the last class will be devoted to students completing the Class and Academic Assessment Survey. If the final tests are not passed, a board examination with the participation of the Head of the Clinic is ordered.

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ATTENTION

The final 10 minutes of the last class in the block/semester/year should be allocated to students'
Survey of Evaluation of Classes and Academic Teachers