



## Internal medicine

<b>1. IMPRINT</b>	
<b>Academic Year</b>	2024/2025
<b>Department</b>	Faculty of Medicine and Dentistry
<b>Field of study</b>	English Dentistry Division
<b>Main scientific discipline</b>	Medical sciences
<b>Study Profile</b>	General Academic
<b>Level of studies</b>	Uniform MSc
<b>Form of studies</b>	Full time studies
<b>Type of module / course</b>	Obligatory
<b>Form of verification of learning outcomes</b>	Exam
<b>Educational Unit / Educational Units</b>	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.)

<b>Head of Educational Unit / Heads of Educational Units</b>	Prof. dr hab. n. med. Piotr Pruszczyk
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<b>2. BASIC INFORMATION</b>			
<b>Year and semester of studies</b>	IV year. VII/VIII semester	<b>Number of ECTS credits</b>	3.00
<b>FORMS OF CLASSES</b>		<b>Number of hours</b>	<b>ECTS credits calculation</b>
<b>Contacting hours with academic teacher</b>			
Lecture (L)		7	0,2
Seminar (S)		18	0,5
Discussions (D)			
e-learning (e-L)			
Practical classes (PC)		35	1,0
Work placement (WP)			

<b>Unassisted student's work</b>		
Preparation for classes and completions	50	1,3

### 3. COURSE OBJECTIVES

C.1.	Obtaining by a student of the medical and dental faculty 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.W2.	basic methods of medical examination and the role of additional tests in the diagnosis, monitoring, prognosis and prevention of organ and systemic disorders, with particular emphasis on their impact on oral tissues
E.W3.	etiopathogenesis and symptomatology of diseases of the respiratory, circulatory, hematopoietic, urogenital, immunological, digestive, musculoskeletal and endocrine systems, with particular emphasis on disease entities whose symptoms occur in the oral cavity
E.W7.	symptoms of acute abdominal diseases, poisoning, infection and sepsis
E.W18.	life-threatening conditions
E.W.20.	cases in which the patient should be referred to hospital

**Skills– Graduate\* is able to:**

E.U1.	carry out differential diagnosis of the most common diseases;
E.U2.	assess and describe the somatic and mental state of the patient;
E.U3.	plan diagnostic and therapeutic procedures in the most common diseases;
E.U4.	interpret the results of laboratory tests;
E.U8.	recognize the risk of life-threatening;
E.U9.	describe and recognize the symptoms of shock and acute heart failure;
E.U17.	recognize pathologies related to smoking, alcoholism and other addictions;

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E.U20.	perform basic medical procedures and treatments: temperature measurement, pulse measurement, non-invasive blood pressure measurement, oxygen treatment, assisted and alternative ventilation, insertion of an oropharyngeal tube, preparation of the operating field, hygienic and surgical disinfection of hands, intravenous;
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<b>5. ADDITIONAL EFFECTS OF LEARNING</b>	
Number of effect of learning	Effects of learning in time
<b>Knowledge – Graduate knows and understands:</b>	
K1	-
<b>Skills– Graduate is able to:</b>	
S1	-
<b>Social Competencies – Graduate is ready for:</b>	
SC1	-

<b>6. CLASSES</b>		
Form of class	Class contents	Effects of Learning
Lecture 1.	Non-cardiac surgery – part 1. Cardiovascular risk assessment before surgery. Discussion of cardiac assessment and preparation of patients for surgery. The principles and scope of necessary assessment depending on the type of surgery and the risk associated with the diseases of the patient undergoing surgery will also be discussed.	E.W.2., E.W3, E.W7., E.U1., E.U3., E.U4., E.W18.
Lecture 2.	Non-cardiac surgery - part 2. Perioperative management. Discussion of cardiac assessment and preparation of patients for surgery. The principles and scope of necessary assessment depending on the type of surgery and the risk associated with the diseases of the patient undergoing surgery will also be discussed - continued.	E.W.2., E.W3, E.W7., E.U1., E.U3., E.U4., E.W18.
Lecture 3.	Atrial fibrillation – modern diagnosis and clinical implications. The lecture presents the criteria for diagnosing atrial fibrillation and the clinical implications of this arrhythmia. The principles of modern diagnostics in patients suspected of having atrial fibrillation will be discussed.	E.W.2., E.W3, E.W7., E.U1., E.U3., E.U4., E.W18.
Lecture 4.	Acute cardiac and cardiovascular conditions - diagnosis and management in dental practice. During the lecture, diagnostics and management of the most common acute cardiac conditions will be recalled and discussed. Students will be introduced to the following disease states: cardiogenic shock, pulmonary edema, acute coronary syndrome, acute pulmonary embolism, acute aortic syndrome, mechanical complications of myocardial infarction, cardiac tamponade, hypertensive crisis, tachyarrhythmias, bradyarrhythmias.	E.W.2., E.W3, E.U1., E.U3., E.U4, E.U17., E.W18.

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Lecture 5.	Acid-base management. Recognition of disorders, basic principles of correction. During the lecture, the physiological and pathophysiological regulation of acid-base metabolism will be discussed. Disease states causing acidosis or alkalosis as well as the principles of treatment of these conditions will be discussed in detail.	E.W.2., E.W3., E.W7., E.U1., E.U3., E.U4., E.W18.
Lecture 6.	Sepsis and septic shock: 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.W.2., E.W3., E.W7., E.U1., E.U3., E.U4., E.U.17., E.W18.
Lecture 7.	Prevention of cardiovascular diseases. During the lecture, students are presented with the most important information regarding the prevention of cardiovascular diseases. Prevention is one of the most important health measures to reduce cardiovascular morbidity and mortality.	E.W.2., E.W3., E.W7., E.U1., E.U4., E.U3.
Seminar 1	Chronic obstructive pulmonary disease. Bronchial asthma. The seminar presents definitions, causes, principles of diagnosis, classification and basic principles of treatment of chronic obstructive pulmonary disease and bronchial asthma. The principles of treatment of an attack of shortness of breath in obstructive lung diseases will be discussed.	E.W.2., E.W3., E.W7., E.U3., E.U4., E.W18., E.U17.
Seminar 2	Pneumonia and pleurisy. Interstitial lung diseases. Lung cancer. The seminar discusses the criteria for diagnosing pneumonia, including abnormalities in the physical examination, history and additional tests. Alternative diagnoses are presented as part of the differential diagnosis. The epidemiology and classification of lung cancer are discussed in detail. The symptoms of lung cancer are divided into: systemic, those related to local growth or metastases, and paraneoplastic syndromes. In addition to treatment methods, the seminar also includes prevention methods.	E.W2., E.W3., E.W7., E.U1., E.U3., E.U4., E.U17.
Seminar 3	Obesity. Metabolic syndrome. Dyslipidemias. Hyperuricemia and gout. Obesity is a condition in which there is an excessive amount of fat tissue in the body. Factors that include metabolic syndrome include abdominal obesity, hypertension, high blood cholesterol and triglycerides, and glucose intolerance. Dyslipidemias are often associated with obesity and metabolic syndrome and pose a significant threat to the cardiovascular system. Gout is often associated with excessive purine intake, obesity, hyperuricemia, and metabolic syndrome. All of these conditions are interconnected and often occur simultaneously, creating serious health risks.	E.W2., E.U1., E.U3., E.U4.
Seminar 4	Anemia: division, diagnosis, differentiation, treatment. Discussion of the principles of evaluation of a complete blood count, division of anemia according to abnormalities found in laboratory tests, presentation of differential diagnosis and treatment methods depending on the clinical condition and severity of anemia.	E.W.2., E.W3., E.W7., E.U1., E.U3., E.U4., E.W18.
Seminar 5	Peptic ulcer disease. Esophageal diseases. Gastrointestinal cancers. During the seminar, students receive information about peptic ulcer disease and esophageal diseases. Additionally, gastrointestinal cancers are discussed, including one of the most common cancers, which is colorectal cancer.	E.W.2., E.W3., E.W7., E.U1., E.U3., E.U4., E.W18.
Seminar 6	Jaundice - causes and differential diagnosis. Viral hepatitis. The seminar will discuss the definition of jaundice and its division according to etiology. Particular attention will be paid to the most important elements of physical and subjective examination in the diagnosis of jaundice and differential diagnosis, including etiology. Students will become familiar with the most important differences resulting from dental diseases.	E.W.2., E.W3., E.W7., E.U1., E.U3., E.U4.
Seminar 7	Cirrhosis. Acute and chronic pancreatitis. Pancreatic cancer. The first part of the seminar concerns the most common causes of liver cirrhosis, characteristic clinical symptoms and complications observed in this disease, the scales used, recommended laboratory and imaging tests and procedures. The second part presents the most common pancreatic diseases: acute and chronic inflammation and pancreatic cancer, with emphasis on clinical symptoms, diagnosis and methods of therapy.	E.W.2., E.W3., E.W7., E.U1., E.U3., E.U4., E.W18., E.U17.

Seminar 8	<p>Acute and chronic renal failure. Kidney transplantation.</p> <p>The first part of the seminar presents the most important groups of causes of acute kidney injury (pre-renal, parenchymal and post-renal), clinical symptoms, abnormalities in laboratory and imaging tests and methods of treatment.</p> <p>The second part discusses the causes of chronic renal failure, symptoms of many systems and organs, diagnostic tests and methods of treatment. Dialysis therapy is discussed in more detail, including indications and preparation for treatment.</p>	E.W.2., E.W3., E.W7., E.U1., E.U3., E.U4., E.W18.
Seminar 9	<p>Water-electrolyte and acid-base management. Recognition of disorders, basic principles of correction.</p> <p>During the lecture, the physiological and pathophysiological regulation of water-electrolyte and acid-base metabolism will be discussed. Disease states causing electrolyte disturbances and acidosis or alkalosis as well as the principles of treatment of these conditions will be discussed in detail.</p>	E.W.2., E.W3., E.W7., E.U1., E.U3., E.U4., E.W18.
Seminar 10	<p>Thyroid function disorders. Hypermetabolic crisis.</p> <p>Acquainting yourself with basic information on the pathophysiology, symptoms, as well as diagnosis and treatment of the most common thyroid diseases. Hyperthyroidism and hypothyroidism as well as the criteria for diagnosis and management of thyroid crises will be discussed in detail.</p>	E.W.2., E.W3., E.U1., E.U3., E.U4., E.W18.
Seminar 11	<p>Fainting, syncope, coma. Consciousness disorders in the dental office.</p> <p>Discussion of the principles and treatment of a patient with consciousness disorders, especially in the dental office. Discussion of the definitions of fainting, syncope and coma. Practical notes to facilitate management and diagnosis.</p>	E.W.2., E.W3., E.W7., E.U1., E.U3., E.U4., E.W18.
Seminar 12	<p>Adrenal diseases. Iatrogenic hyperfunction and hypoadrenocorticism.</p> <p>Adrenal diseases are divided into those involving excess or deficiency of hormones and, according to the cause of the disorder, into primary and secondary. The most common adrenal diseases are discussed in detail, i.e. Cushing's syndrome, Conn's syndrome and Addison's disease. The causes of secondary adrenal insufficiency are presented. The causes and principles of management in acute adrenal crisis are discussed.</p>	E.W.2., E.W3., E.W7., E.U1., E.U3., E.U4., E.W18.
Seminar 13	<p>Calcium and phosphate metabolism. Parathyroid diseases.</p> <p>During the seminar, the physiological and pathophysiological regulation of calcium and phosphate metabolism will be discussed. Disease states causing hypocalcemia and hypercalcemia and the principles of treatment of these conditions will be discussed in detail.</p>	E.W2., E.W3., E.U1., E.U3., E.U4., E.W18.
Seminar 14	<p>Systemic tissue diseases. Vasculitis. Basics of rheumatological diagnosis.</p> <p>The seminar covers basic information about systemic tissue diseases. Additionally, the differential diagnosis of vasculitis and rheumatological diseases will be discussed.</p>	E.W2., E.W3., E.U1., E.U3., E.U4.
Seminar 15	<p>Dental procedures in patients treated with anticoagulants.</p> <p>The seminar will discuss the principles of antithrombotic treatment in various disease states and the practical aspects of antithrombotic treatment during various dental procedures.</p>	E.W2., E.W3., E.W7., E.U1., E.U3., E.U4., E.U9., E.W18.
Seminar 16	<p>Infective endocarditis.</p> <p>The seminar covers epidemiology, the most common etiology and risk groups of infective endocarditis. The important role of imaging tests, especially echocardiography and microbiological tests, in making the diagnosis is emphasized. The presentation also includes the position on the prevention of infective endocarditis and basic antibiotic therapy regimens.</p>	E.W2., E.W3., E.U1., E.U3., E.U4., E.U9., E.W18.
Seminar 17	<p>Patient with coronary heart disease - preparation for dental surgery, perioperative management.</p> <p>During the seminar, the student learns the definitions, etiopathogenesis, clinical picture, natural course and treatment of chronic coronary syndromes. The preparation of a patient with chronic coronary syndrome for dental procedures will be discussed, with particular emphasis on antiplatelet and anticoagulant therapy.</p>	E.W2., E.W3., E.U1., E.U3., E.U4., E.U9., E.W18.

Seminar 18	Patient with hypertension and/or heart failure - preparation for dental surgery, perioperative management. During the seminar, basic information about hypertension and heart failure will be recalled. Next, the management of potential emergencies in hypertension and heart failure that may occur in the dental office will be discussed, with emphasis on pre-hospital care in the above-mentioned area.	E.W2., E.W3., E.U1., E.U3., E.U4., E.U9., E.W18.
Seminar 19	Patients with diabetes, thyroid diseases and other endocrine problems - preparation for a dental procedure, perioperative procedures. The seminar will discuss peri-procedural management of patients with diabetes, thyroid or adrenal gland diseases in the context of preparation for planned or urgent dental procedures. Particular attention will be paid to the most important elements of additional tests allowing for the safe qualification of the patient for the procedure.	E.W2., E.W3., E.W7., E.U1., E.U3., E.U4., E.U9., E.W18.
C1-C9. Practical training	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.U1., E.U2., E.U3., E.U4., E.U9., E.U20., E.W.20.
C10-C19 Practical training	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.U1., E.U2., E.U3., E.U4., E.U9., E.U20., E.W.20.
C20-C29 Practical training	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 care. Exercises in clinical laboratories and familiarization with the most important methods used in internal medicine practice.	E.U1., E.U2., E.U3., E.U4., E.U9., E.U20., E.W.20.
C30-C35 Practical training	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.	E.U1., E.U2., E.U3., E.U4., E.U9., E.U20., E.W.20.

## 7. LITERATURE

### Obligatory

1. Kumar and Clark's Clinical Medicine, 9th Edition, Parveen Kumar, Michael L Clark
2. Davidson's Principles and Practice of Medicine, 23rd Edition, Stuart H. Ralston, Ian Penman, Mark Strachan, Richard Hobson

### Supplementary

1. Macleod's Clinical Examination 14th Edition, J. Alastair Innes Anna Dover Karen Fairhurst
2. Evidence-Based Medicine 5th Edition, Sharon Straus Paul Glasziou W. Scott Richardson R. Brian Haynes
3. In Polish: Interna Szczeklika - mały podręcznik, Medycyna Praktyczna, Kraków

<b>8. VERIFYING THE EFFECT OF LEARNING</b>		
<b>Code of the course effect of learning</b>	<b>Ways of verifying the effect of learning</b>	<b>Completion criterion</b>
E.W2., E.W3., E.W7., E.W18, E.W20., E.U1., E.U2., E.U3., E.U4., E.U9., E.U17., E.U20.	<p>During classes, assistants check knowledge of the applicable material from indicated sources of knowledge and textbooks and constantly assess practical skills in clinical examinations.</p> <p>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 semesters 7 and 8 (the grade for the final report after the 4th year is the grade from the test colloquium after semester 8).</p> <p>The final 10 minutes of the last class will be devoted to students completing the Class and Academic Teacher Assessment Survey.</p> <p>The final test exam takes place in the summer examination session - the test contains 60 closed, single-choice questions, the test lasts 60 minutes, for each question one of 4 answers to choose from. The scope of knowledge in the final exam covers all the material from classes in the 3rd and 4th year.</p> <p>The final resit examination takes the form of an oral answer and takes place during the resit session of the summer semester.</p>	<p>Attendance at all classes.</p> <p>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.</p> <p>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)</p> <p>Final exam: to obtain a passing grade, you must obtain &gt;60% of correct answers, i.e. at least 37 points out of a maximum of 60 possible.</p>

<b>9. ADDITIONAL INFORMATION</b>
<p>Classes are held according to the schedule from the Dean's Office in the Clinic's seminar room (ul. Lindleya 4, pavilion 3, 2nd floor). Lectures in the lecture hall indicated in the plan from the Dean's Office or 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. Seminars are held in the clinic's seminar room (ul. Lindleya 4, pavilion 3, 2nd floor). Exercises on departments of the Clinic, in laboratories or outpatient clinics.</p> <p>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 making up classes with another group.</p> <p>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.</p> <p>Credit for classes is based on attendance and a test, which takes place on the last day of classes in the training block. If you fail the final test, you must take a make-up test on the date agreed with the course coordinator. If the resit test is not passed, a board test with the participation of the Head of the Clinic is ordered. Passing the final test is a necessary condition for admission to the exam.</p> <p>There is a student research club with a cardiology profile at the clinic - the supervisor is Dr. Hab. med. Piotr Bienias</p>

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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