



MEDICAL  
UNIVERSITY  
OF WARSAW



**Medical University of Warsaw**  
**Faculty of Medicine - English Division**  
**61 Żwirki i Wigury Street**  
**02-091 Warsaw, Poland**

<http://www.wum.edu.pl/>

**3<sup>rd</sup> YEAR CURRICULUM**

**6-year program**

**Academic year: 2024/2025**

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## **AUTHORITIES OF MEDICAL UNIVERSITY OF WARSAW – TERM 2024-2028**

**Rector** – Professor Rafał Krenke MD, PhD

**Vice Rector for Student Affairs and Education** – Professor Marek Kuch, MD, PhD

**Vice Rector for Science and Technology Transfer** – Professor Marcin Sobczak, MD, PhD

**Vice Rector for Human Resources** – Professor Dorota Olczak-Kowalczyk, MD, PhD

**Vice Rector for Clinical Affairs and Investments** – Professor Agnieszka Cudnoch-Jędrzejewska, MD, PhD

**Vice Rector for International Relations, Development and Promotion** – Professor Michał Grąt, MD, PhD

## **FACULTY AUTHORITIES OF MEDICAL UNIVERSITY OF WARSAW – TERM: 2024-2028**

**Faculty of Medicine** – Professor Paweł Włodarski MD, PhD

**English Division – Faculty of Medicine** – Assoc. Prof. Jacek Sieńko, MD, PhD.

## **DEAN'S OFFICE**

**Head of the Dean's Office** – Krystyna Jarząb, MA

**Student Administration Officer (1st, 2nd, 3rd -Year)** – Aleksandra Chilecka

**Student Administration Officer (4th, 5th, 6th -Year)** – Dominka Renik, MA and Patrycja Karpińska, MA

## **STUDENT GOVERNMENT REPRESENTATIVES:**

**President** – Alexis Vourtsis

**Vice President, Head of Academic Affairs** – Alexander Steiner

**Vice President, Head of Student Affairs** – Sylvie Marie Régine Etienne

**Head of Communications and Administrative Management** – Maria Kienitz

**Social Media Coordinator** – Michail Koutentakis

**Events Coordinator** – Dyia Bachour

**Events Coordinator** – Divit Amarnani

**www:** <https://edsgwum.wixsite.com/edsg>

## **CLASS REPRESENTATIVE:**

Arman Sürmeli – 3 year

## SCHEDULE – ACADEMIC YEAR 2024/2025

### 6-year program

#### **WINTER SEMESTER – 01.10.2024 – 16.02.2025**

STUDENT'S ACADEMIC CLASSES:	01.10.2024 – 22.12.2024
	07.01.2025 – 26.01.2025
WINTER HOLIDAYS:	23.12.2024 – 06.01.2025
<b>EXAM SESSION:</b>	<b>27.01.2025 – 02.02.2025</b>
DAYS OFF BETWEEN SEMESTER:	03.02.2025 – 09.02.2025
RETAKE EXAM SESSION:	10.02.2025 – 16.02.2025

#### **SUMMER SEMESTER – 17.02.2025 – 30.09.2025**

STUDENT'S ACADEMIC CLASSES:	17.02.2025 – 18.04.2025
	05.05.2025 – 15.06.2025
EASTER HOLIDAYS:	19.04.2025 – 27.04.2025
SPRING HOLIDAYS:	28.04.2025 – 04.05.2025
DAYS OFF BEFORE EXAM SESSION:	16.06.2025 – 22.06.2025
<b>EXAM SESSION:</b>	<b>23.06.2025 – 11.07.2025</b>
SUMMER HOLIDAYS:	14.07.2025 – 30.09.2025
RETAKE EXAM SESSION:	01.09.2025 – 14.09.2025

Curriculum of the 3<sup>rd</sup> year of 6-year 2024/2025 ED program and the list of contents

3rd year

page	subject	form of credit	semester	Total no of hours	including				ECTS
					lecture	seminar	class	practical	
5	Genetics	exam	2	30	2	11	17		2
11	Microbiology	exam	1&2	80		10	70		6
18	Parasitology	exam	1	35		10	25		2
23	Pathomorphology	exam	1&2	160	40	20	100		17
28	Laboratory Diagnostics	exam	2	45	5	25	15		2
33	Radiology	exam	1	72	10	15	47		4
38	Polish for Medicine-Communication Skills In Medicine	exam	1&2	60			60		3
44	Oncogenetics	credit	2	13		10	3		1
49	Introduction to Internal Medicine	credit	1&2	100	10	20	70		5
54	Medical Psychology	credit	1	20		10	10		1
59	Medical Communication	credit	1	10			10		1
63	Pharmacology and Toxicology	credit	1&2	100	30	10	60		9
69	Introduction to Pediatrics	credit	1&2	60		20	40		4
76	Nuclear Medicine	credit	1	30		7	23		2
81	Propedeutics of Stomatology	credit	2	18	18				1
86	Vocational training - Internal medicine	credit	2	140				140	4
-	Optional course	credit	1&2	60		60			4
				1033	115	228	550	140	68



## GENETICS - CLINICAL

### 1. IMPRINT

<b>Academic Year</b>	2024/2025
<b>Department</b>	Faculty of Medicine
<b>Field of study</b>	Medicine
<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 Medical Genetics Center for Biostructure Research, First Faculty of Medicine 3c Pawińskiego St., 02-106 Warsaw phone: +48 22 572 06 95, fax: +48 22 572 06 96 <a href="http://www.genetyka.wum.edu.pl">http://www.genetyka.wum.edu.pl</a> mail: <a href="mailto:krzysztof.szczaluba@wum.edu.pl">krzysztof.szczaluba@wum.edu.pl</a>

<b>Head of Educational Unit / Heads of Educational Units</b>	Head of the Department: Professor Rafał Płoski MD PhD
<b>Course coordinator</b>	Assoc. Prof. Krzysztof Szczaluba MD PhD e-mail: <a href="mailto:krzysztof.szczaluba@wum.edu.pl">krzysztof.szczaluba@wum.edu.pl</a> tel. 22 572 06 95
<b>Person responsible for syllabus</b>	Krzysztof Szczaluba MD PhD e-mail: <a href="mailto:krzysztof.szczaluba@wum.edu.pl">krzysztof.szczaluba@wum.edu.pl</a> tel. 22 572 06 95
<b>Teachers</b>	Rafał Płoski MD PhD Andrzej Kocharński MD PhD Krzysztof Szczaluba MD PhD Jennifer Castaneda MD PhD Katarzyna Kuśmierska PhD Snir Boniel MD

## 2. BASIC INFORMATION

<b>Year and semester of studies</b>	3rd Year and 5th Semester	<b>Number of ECTS credits</b>	2.00
<b>FORMS OF CLASSES</b>		<b>Number of hours</b>	<b>ECTS credits calculation</b>
<b>Contacting hours with academic teacher</b>			
Lecture (L)		2	0.08
Seminar (S)		11	0.44
Classes (C)		17 (live, contact classes:17)	0.68
e-learning (e-L)		-	-
Practical classes (PC)		-	-
Work placement (WP)		-	-
<b>Unassisted student's work</b>			
Preparation for classes and completions		5	0.8

## 3. COURSE OBJECTIVES

O1	– knowledge of causes, symptoms, principles of diagnosis and therapeutic management within the scope of the most frequent genetic disorders in the population; – basic information in genetics, such as modes of inheritance and classification of genetic disorders,
O2	- application of diagnostic tests

	<ul style="list-style-type: none"> <li>- understanding cytogenetic and molecular tests results;</li> <li>- skills to communicate genetic information to patients and their families.</li> </ul>
O3	<ul style="list-style-type: none"> <li>- ability to verify indications for pre- and postnatal diagnostics;</li> <li>- ability to make a decision on the necessity of performing genetic tests and choosing appropriate tests;</li> <li>- ability to gather and analyze medical genetic history and draw pedigrees,</li> </ul>

**4. STANDARDS OF LEARNING – DETAILED DESCRIPTION OF EFFECTS OF LEARNING** (*concerns fields of study regulated by the Regulation of Minister of Science and Higher Education from 26 of July 2019; does not apply to other fields of study*)

<b>Code and number of effect of learning in accordance with standards of learning</b>	<b>Effects in the field of:</b> ( <i>in accordance with appendix to the Regulation of Minister of Science and Higher education from 26th of July 2019</i> )
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**Knowledge – Graduate\* knows and understands:**

C.W3	normal human karyotype and rules of sex determination
C.W7	chromosomal aberrations as causes of human disease
C.W9	basic rules of genetic and chromosomal mutation diagnosis
C.W42	basic directions of therapy development, in particular the possibility of cell therapy and gene therapy in specific diseases
E.W3 10	causes, symptoms, principles of diagnosis and therapeutic treatment of the most common diseases in children 10) genetic syndromes,
E.W5	basic methods of diagnosing and treating the foetus
E.W37	causes, symptoms, the rules of diagnosis and treatment of the most frequent inherited diseases

**Skills– Graduate\* is able to:**

C.U2	identify indications for prenatal testing
C.U3	make informed decisions about necessity to perform cytogenetic and molecular testing
D.U5	conduct an interview with an adult patient, a child and the family with empathy and listeni actively; is able to discuss the patient’s life situation
D.U6	inform a patient of the purpose, course and any risk of proposed diagnostic or treatment actions and obtain informed consent from the patient
D.U8	pass bad news to a patient and his/her family
E.U16	plan diagnostic, therapeutic and preventive treatment

\* In appendix to the Regulation of Minister of Science and Higher education from 26th of July 2019 „graduate”, not student is mentioned.

**5. ADDITIONAL EFFECTS OF LEARNING** (*non-compulsory*)

<b>Number of effect of learning</b>	<b>Effects in the fields of:</b>
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**Knowledge – Graduate knows and understands:**

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**Skills– Graduate is able to:**

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**Social Competencies – Graduate is ready for:**

K1-K8	<p>establishing and maintaining a deep and respectful contact with the patient, as well as showing understanding for worldview and cultural differences</p> <p>be guided by the good of the patient</p> <p>observance of medical confidentiality and patient's rights</p> <p>taking actions towards the patient based on ethical principles, with the awareness of social conditions and limitations resulting from the disease</p> <p>perceiving and recognizing own limitations and self-assessment of deficits and educational needs</p> <p>promoting pro-health behavior</p> <p>use of objective sources of information</p> <p>formulating conclusions from own measurements or observations</p>
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**6. CLASSES**

Form of class	Class contents	Effects of Learning
Lecture 1	<p>‘Clinical evaluation and therapeutic management of genetic disorders.’</p> <p>The lecture contains examples of more common genetic disorders along with the methods of their clinical diagnosis, both in the pre- and postnatal aspect. The second part shortly describes therapeutic management of genetic conditions.</p>	<p>C.W9</p> <p>E.W310)</p> <p>E.W5</p> <p>E.W37</p> <p>C.U2</p> <p>C.U3</p> <p>E.U16</p>
Lecture 2	<p>‘Diagnostics and discovery of new genetic diseases in the age of next generation sequencing (NGS)’</p> <p>The lecture presents the diagnostic possibilities of the NGS technique on specific examples of new genetic disorders.</p>	<p>C.W9</p> <p>C.U3</p>
Seminars and Practice	<p>Reproductive genetics with elements of prenatal diagnosis</p> <p>Personalized pediatrics</p> <p>Microcephaly</p> <p>Familial hypercholesterolaemia</p> <p>Monogenic diabetes</p> <p>Genetic disorders with dysmorphism</p> <p>Clinical cytogenetics</p> <p>Neurogenetics</p> <p>Gene therapies</p>	<p>C.W3</p> <p>C.W7</p> <p>C.W9</p> <p>C.W42</p> <p>E.W3 10)</p> <p>E.W5</p> <p>E.W37</p> <p>C.U2</p> <p>C.U3</p> <p>D.U5</p> <p>D.U6</p> <p>D.U8</p> <p>E.U16</p>
Practice Classes	<p>PC1 Cytogenetics and dysmorphology</p> <p>PC2. Tasks - clinical cases in pediatrics and prenatal diagnosis</p> <p>PC3. Quiz - questions and answers (the most common genetically conditioned diseases and methods of their diagnosis and therapy)</p>	<p>C.W7</p> <p>C.W9 C.W42</p> <p>E.W310)</p> <p>E.W37</p>



	PC4. Neurogenetics and Gene Therapies  All live classes in the room (contact exercises)	E.W5 C.U2 C.U3 E.U16 D.U5 D.U6 D.U8 K1-K8
Additional materials	List of 28 genetic syndromes	E.W310) E.W37

<b>7. LITERATURE</b>
<b>Obligatory</b>
Medical Genetics Jorde, Carey, Bamshad 4th Edition Elsevier
<b>Supplementary</b>
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<b>8. VERIFYING THE EFFECT OF LEARNING</b>		
Code of the course effect of learning	Ways of verifying the effect of learning	Completion criterion
<i>e.g. G.K1, G.S1, K1</i>	<i>This field defines the methods used for grading students e.g. pop quiz, test, written report etc.</i>	<i>e.g. threshold number of points</i>
C.W3, C.W7, C.W9, C.W42, E.W3 10), E.W5, E.W37 and from 2nd yr syllabus: C.W1, C.W2, C.W4-6, C.W8 i B.W13, B.W14	Exam (test)	Answering correctly to more than 50% of questions
	Participation in live tasks	Verification of student's presence and activities
C.U2, C.U3, D.U5, D.U6, D.U8, E.U16	Oral report on performed tasks	Correctly performed tasks
K1-K8	Observation of student's behavior and interactions	Command of social competencies

<b>9. ADDITIONAL INFORMATION</b> ( <i>information essential for the course instructor that are not included in the other part of the course syllabus e.g. if the course is related to scientific research, detailed description of, information about the Science Club</i> )
<b>Students are obliged to attend a lecture, as well as all seminars and classes. No absence is accepted during classes. An absence on classes and seminars will have to be covered with another group. Change of groups is possible only as an exchange with a person from another group. Being late for over 15 minutes counts as an absence.</b>
<b>Person responsible for students affairs: Krzysztof Szczaluba, MD, PhD <a href="mailto:krzysztof.szczaluba@wum.edu.pl">krzysztof.szczaluba@wum.edu.pl</a></b>

**Evaluation criteria**

**Form of passing the course:** exam (test). The exam evaluates the abilities and knowledge gained during the Genetics course during the fourth and sixth semesters of the studies (2<sup>nd</sup> and 3<sup>rd</sup> years).

Grade	Criteria
<b>2,0</b>	Not getting over 50% of points
<b>3,0</b>	Getting at least 51% of points
<b>3,5</b>	Getting at least 61% of points
<b>4,0 (good)</b>	Getting at least 71% of points
<b>4,5 (above good)</b>	Getting at least 81% of points
<b>5,0 (very good)</b>	Getting at least 91% of points

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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.



## Microbiology

<b>1. IMPRINT</b>	
<b>Academic Year</b>	2024/2025
<b>Department</b>	Faculty of Medicine
<b>Field of study</b>	Medicine
<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>	Credit
<b>Educational Unit / Educational Units</b>	Chair and Department of Medical Microbiology 5 Chałubińskiego Street 02-004 Warsaw, Poland +48 22 628 27 39 <a href="http://mikrobiologia.wum.edu.pl">http://mikrobiologia.wum.edu.pl</a> e-mail: <a href="mailto:mikrobiologia@wum.edu.pl">mikrobiologia@wum.edu.pl</a>
<b>Head of Educational Unit / Heads of Educational Units</b>	prof. dr hab. Hanna Pituch (e-mail: <a href="mailto:hanna.pituch@wum.edu.pl">hanna.pituch@wum.edu.pl</a> )
<b>Course coordinator</b>	Dr n. med. Robert Kuthan, e-mail: <a href="mailto:robert.kuthan@wum.edu.pl">robert.kuthan@wum.edu.pl</a>
<b>Person responsible for syllabus</b>	prof. dr hab. Hanna Pituch Dr n. med. Robert Kuthan, e-mail: <a href="mailto:robert.kuthan@wum.edu.pl">robert.kuthan@wum.edu.pl</a>

<b>Teachers</b>	dr n. med. Robert Kuthan lek. Gabriel Zaremba-Wróblewski dr hab. n. med. Anna Henriques dos Santos de Sepulveda mgr biol. Kinga Markowska
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<b>2. BASIC INFORMATION</b>			
<b>Year and semester of studies</b>	III year, winter and summer semester	<b>Number of ECTS credits</b>	6.00
<b>FORMS OF CLASSES</b>		<b>Number of hours</b>	<b>ECTS credits calculation</b>
<b>Contacting hours with academic teacher</b>			
Lecture (L)			
Seminar (S)		10	0.50
Classes (C)		70	3.50
e-learning (e-L)			
Practical classes (PC)			
Work placement (WP)			
<b>Unassisted student's work</b>			
Preparation for classes and completions		50	2,00

<b>3. COURSE OBJECTIVES</b>	
O1	Students will learn about the classification of microorganisms, the general characteristics of bacteria, viruses and fungi, the pathogenicity of microorganisms, the physiological significance of human microbiota. They will learn about the epidemiology of infections, groups of antimicrobial drugs, mechanisms of antibiotic resistance and the principles of rational chemotherapy as well as composition and role of human microbiome.
O2	Familiarize students with the course of microbiological examinations, methods of recognizing infectious diseases, diagnostic algorithms, limitations of the diagnostic methods and tests used, causes of pre-laboratory errors and methods of determining sensitivity to antibiotics, antifungal drugs and antiviral drugs.
O3	Learning infection prevention methods such as: passive and active prevention, vaccination programs, hospital hygiene (disinfection, sterilization, aseptic procedures).
O4	Teach students how to perform basic laboratory activities, operate measuring devices and assess the accuracy of measurements performed, which are necessary for proper cooperation between the physician and microbiologist in diagnosing infectious diseases.

**4. STANDARDS OF LEARNING – DETAILED DESCRIPTION OF EFFECTS OF LEARNING** (*concerns fields of study regulated by the Regulation of Minister of Science and Higher Education from 26 of July 2019; does not apply to other fields of study*)

<b>Code and number of effect of learning in accordance with standards of learning</b>	<b>Effects in the field of:</b> ( <i>in accordance with appendix to the Regulation of Minister of Science and Higher education from 26th of July 2019</i> )
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**Knowledge – Graduate\* knows and understands:**

G.K1/ C.W11	genetic mechanisms for the acquisition of drug resistance by microorganisms and tumor cells;
G.K2/ C.W12	classify microorganisms, with consideration of pathogenic and present in the physiological flora;
G.K3/ C.W13	epidemiology of infections with viruses and bacteria, fungi and parasites including geographical coverage of their distribution;
G.K4/ C.W14, C.W15	abiotic and biotic (viruses, bacteria) effects of the environmental factors on the human body and the population of people and the way of their entering the human body; consequences of exposure of the human body to various chemical and biological factors and the principle of prevention;
G.K5/ C.W16	invasive forms or developmental stages of selected parasitic fungi, protozoa, helminths, and arthropods, taking into account the geographical range of their occurrence;
G.K6/ C.W18	symptoms of iatrogenic infections, roads of their spread and pathogens causing changes in individual organs;
G.K7/ C.W19	basics of microbiological and parasitological diagnostics;
G.K8/ C.W20	basics of disinfection, sterilization and aseptic procedures;
G.K9/ C.W33	external and internal pathogens, modifiable and non-modifiable;
G.K10/ C.W40	understands the problem of drug resistance, including multi-drug resistance.

**Skills– Graduate\* is able to:**

G.S1/ C.U6	assesses environmental threats and uses basic methods allowing to detect the presence of harmful factors (biological and chemical) in the biosphere;
G.S2/ C.U9	formulates a microscopic preparation and recognizes pathogens under the microscope;
G.S3/ C.U10	interprets the result of microbiological tests;
G.S4/ C.U15	designs rational regiment of chemotherapy of infections, empirical and targeted;
G.S5/ B.U9	uses simple instruments measuring and assesses the accuracy of measurements
G.S6/ D.U17	critically analyzes medical literature, and draws conclusions.

\* In appendix to the Regulation of Minister of Science and Higher education from 26th of July 2019 „graduate”, not student is mentioned.

**5. ADDITIONAL EFFECTS OF LEARNING** (*non-compulsory*)

<b>Number of effect of learning</b>	<b>Effects in the fields of:</b>
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**Knowledge – Graduate knows and understands:**

not applicable

**Skills– Graduate is able to:**

not applicable

**Social Competencies – Graduate is ready for:**

SC1. K1

The graduate is aware of his own limitations and skills.

SC2. / K2

The graduate is able to use objective sources of information;

**6. CLASSES**

Form of class	Class contents	Effects of Learning
Classes	1. Pathogenic properties of microorganisms. The concept of microbiota and its role in human health.  Basics of diagnosis of bacterial infections (culture and microscopic methods).	G.K7, G.S1, G.S2 / C.W19 C.U6, , C.U9
	2. Hospital hygiene. Sterilization and disinfection. Methods of air, surface and water purity control.	G.K8 / C.W20, C.U6
	3. Gram-positive and Gram-negative cocci.	G.K2, G.K3, G.K4, G.K7, G.K9, G.S2, G.S5 // C.W12, C.W13, C.W14, C.W15, C.W19, C.W33, C.U9, B.U9
	4. Gram-negative bacilli.	G.K2, G.K3, G.K4, G.K7, G.K9, G.S2, G.S5 / C.W12, C.W13, C.W14, C.W15, C.W19, C.W33, C.U9, B.U9
	5. Strictly anaerobic bacteria.	G.K2, G.K3, G.K4, G.K7, G.K9, G.S2, G.S5 / C.W12, C.W13, C.W14, C.W15, C.W19, C.W33, C.U9, B.U9
	6. Gram-positive bacilli and Mycobacteria.	G.K2, G.K3, G.K4, G.K7, G.K9, G.S2, G.S5 / C.W12, C.W13, C.W14, C.W15, C.W19, C.W33, C.U9, B.U9
	7. Pathogenic fungi. Mycotoxins. Mycoallergens. Antifungal drugs.	G.K2, G.K3, G.K5, G.K7, G.S2, G.S5 / C.W12, C.W13, C.W16, C.W19, C.U9, B.U9
	8. Bacterial drug susceptibility testing. Bacterial resistance to antibiotics. Detection of mechanisms of resistance to antibiotics and chemotherapeutics. Principles of rational antibiotic therapy. Discussion of the result of the microbiological test.	G.K1, G.K10, G.S4, G.S5 / CW 11, CW40, C.U15, B.U9
	9. Viruses, general properties and methods of recognition of viral infections. Antiviral treatment.	G.K1, G.K2, G.K3, G.K4, G.K7 G.K8, G.K2, G.K3, G.S5, G.S6/ C.W 11C.W12, C.W13, C.W 14, C.W19,C.W20, C.U10, B.U9, D.U17
	10. DNA viruses	G.K3, G.K4, G.K6, .S1, G.S6 / C.W13, C.W14, C.W15, C.W18, C.U6, D.U17
	11. RNA viruses. Diagnostics of HIV and hepatitis.	G.K3, G.K4, G.K6, G.S1, G.S6 / C.W13, C.W14,C.W15, C.W18, C.U6, D.U17

	12. Respiratory tract infections.	G.K6, G.K7, G.S1, G.S3, G.S4, G.S5 / C.W18, C.W19, C.U6, C.U10, C.U15, B.U9, K1
	13. Gastrointestinal tract infections.	G.K6, G.K7, G.S1, G.S2, G.S3, G.S4, G.S5 / C.W18, C.W19, C.U6, C.U9, C.U10, C.U15, B.U9, K1
	14. Urinary tract infections.	G.K6, G.K7, G.S1, G.S2, G.S3, G.S4, G.S5, / C.W18, C.W19, C.U6, C.U9, C.U10, C.U15, B.U9, K1
	15. Skin, wounds, bones and joints infections.	G.K6, G.K7, G.S1, G.S2, G.S3, G.S4, G.S5 / C.W18, C.W19, C.U6, C.U9, C.U10, C.U15, B.U9, K1
	16. Nervous system infections. Prion diseases.	G.K6, G.K7, G.S1, G.S2, G.S3, G.S4, G.S5 / C.W18, C.W19, C.U6, C.U9, C.U10, C.U15, B.U9, K1
	17. Bloodstream infection.	G.K6, G.K7, G.S1, G.S2, G.S3, G.S4, G.S5 / C.W18, C.W19, C.U6, C.U9, C.U10, C.U15, B.U9, K1
	18. Sexually transmitted microbes. Vertical and perinatal infections.	G.K3, G.K4, G.K6, G.K7, G.K9, G.S3, G.S6/ C.W13, C.W15, C.W18, C.W19, C.W33, C.U10, DU17
Seminars	1. Atypical bacteria, rickettsiae, spirochetes	G.K3, G.K4, G.K7, G.S2, G.S5/ C.W13, C.W14, C.W19, C.U6, C.U10.
	2. Zoonotic infections.	G.K3, G.K4, G.K5, G.K7, G.S1/ C.13, C.W14, C.W16, C.W11, C.U6
	3. Bacterial resistance to antibiotics. Detection of mechanisms of resistance to antibiotics and chemotherapeutics. Principles of rational antibiotic therapy.	G.K1, G.K10, G.S4, G.S5, /C.W11, C.W40, C.U15, B.U9,
	4. Infection prevention.	G.K4, G.K6, G.S1, G.S6 / C.W14, C.W15, C.W18, C.U17,
	5. Nosocomial infections.	G.S1, G.K9, G.K10, G.S1, G.S3, G.S4, G.S5 /C.W18, C.W33, C.W40, C.U6, C.U10, C.U15, K1.

## 7. LITERATURE

### Obligatory

1. **Medical Microbiology, P.R. Murray, K.S. Rosenthal and M.A. Pfaller. Elsevier. 9th ed. 2020.**
2. Textbook of Diagnostic Microbiology, C. R. Mahon, D. C. Lehman, 6<sup>th</sup> Ed., Elsevier 2019 or 7<sup>th</sup> Ed (2022).
3. Training materials provided by the Chair and Department of Medical Microbiology on the e-learning platform.

### Supplementary

1. Medical Microbiology, Jawetz, Melnick, & Adelberg's Medical Microbiology, 28th ed. New York, McGraw-Hill, 2019.
2. The European Committee on Antimicrobial Susceptibility Testing – EUCAST - Guidelines and Rationale Documents. <https://www.eucast.org/>

## 8. VERIFYING THE EFFECT OF LEARNING

Code of the course effect of learning	Ways of verifying the effect of learning	Completion criterion
	Participation in classes	Verification of student's attendance and activity during

		classes
G.K1, G.K2, G.K3, G.K4, G.K5, G.K6, G.K7, G.K8, G.K9, G.K10, G.S1, G.S2, G.S3, G.S4, G.S5, G.S6 /C.W11, C.W12, C.W13, C.W14, C.W15, C.W16, C.W18, C.W19, C.W20, C.W33, C.W40, C.U6, C.U9 C.U10, C.U15, B.U9, D.U17, K1, K2	<p><b>Colloquium 1</b> Range of topics: classes 1 – 7; seminar 1 theoretical colloquium, written, 6 open questions.</p> <p><b>Colloquium 2</b> Topics include: classes 8 - 11, theoretical colloquium, written, 5 open questions.</p> <p>Re-take colloquia (1 and 2) have an oral form, commission colloquia have a written form (works will be checked by 2 assistants).</p> <p><b>Colloquium 3</b> Topics include: classes 12 -18, Seminar: 2-4 practical and oral colloquium, 3 tasks: 1. Preparation and discussion of microscopic preparations. 2. Discussion of the microbiological examination step. 3. Interpret the result of the diagnostic test.</p> <p>The amendment colloquium and the commission colloquium are oral.</p>	<p>The answer to each question is assessed on a scale of 0-6. The criterion for passing each colloquium (1-2) is to receive ≥ 50% points.</p>
	Completion of tasks posted on the e-learning platform.	Each student is required to read at least 3 case reports and answer questions about microbiological diagnostics, treatment and/or prevention. The passing criterion is the confirmation of the task completion in the system.
	Observation of the student by the leading teacher.	Sufficient assimilation of learning outcomes in the field of knowledge, skills and competences.
	<p><b>Final exam</b> Date of exam: summer examination session. Number of questions: 80. Format of questions: MCQ. Duration: 80 min. Each question is rated on a point scale: 0 or 1. The passing criterion is to obtain &gt;45 points (&gt;55%).</p> <p>Any complaint to the examination questions must be written during or right after the exam, but before leaving the examination room. The complaint must include: student's name and/or index number, examination test version, question number, substantiation for the complaint.</p> <p><b>Re-take of the Final exam</b> Date of exam: re-take examination session. Format of questions: Students will be informed about the date and form of the exam before the summer break.</p>	<p>Each question is graded on a point scale: 0 or 1.</p> <p>The criterion for passing is to obtain &gt;45 points (&gt;55%)</p> <p>fail = 2.0. (ndst) - 0-45 points satisfactory = 3.0, (dst) - 46-52 points better than satisfactory = 3.5, (ddb) - 53- 59 points good = 4.0, (db) - 60-66 points better than good = 4.5, (pdb) - 67-73 points very good = 5.0, (bdb) – 74-80 points</p>

**9. ADDITIONAL INFORMATION** (information essential for the course instructor that are not included in the other part of the course syllabus e.g. if the course is related to scientific research, detailed description of, information about the Science Club)

Exercises and seminars take place in the Department of Medical Microbiology in the Prof. Edmund Mikulaszek Hall, Anatomicum building, second floor, 5 Chałubińskiego Street (corner of Oczki Street).



Detailed class regulations, credit criteria, and timetables can be found on the Department of Microbiology's website.

<https://mikrobiologia.wum.edu.pl>.

Didactic materials, information about class schedules, and announcements are published on the e-MUW platform.

<https://e-learning.wum.edu.pl/course/view.php?id=5560>.

The student is obliged to comply with the Regulations for the organization of didactic classes at the Department of Medical Microbiology and the Regulations of Studies and Examination of the Medical University of Warsaw.

The student is obliged to prepare theoretically for each subsequent class. It is allowed to check the preparation for the exercise and the seminar.

***As a preparation for the classes, before each class student should read subject related chapter from one of the books listed in the section 7 – Obligatory literature.***

The student is obliged to attend classes with his group (it is not possible to transfer to another group or do homework with another group, except for students studying according to the individual organization of studies (IOS).

Attendance at all exercises is mandatory.

***Classes starts on time, any student who came late will not be allowed to enter the classroom.  
Being late to class by more than 15 minutes is counted as an absence from class.***

All student absences from classes (also excused) should be made up. Making up for missed classes will be determined individually. The student is obliged to agree with the assistant conducting the classes on the mode, form, and date of making up for the exercise or seminar. The student is obliged to control his attendance.

***Laboratory classes are composed of theoretical and practical parts, which both are obligatory to participated in. Seminars classes are compulsory to participated in.***

The condition for admission to the exam is attendance at all classes and passing 3 colloquium tests.

Consequence of the commission colloquium failure: microbiology course not completed.

During classes it is necessary to have protective clothing (cotton apron).

The laboratory classes are organized as practical activities. Students will be working with infectious material, therefore the following rules have to be observed:

- *hands must be washed and/or disinfected after each class,*
- *jewelry must be removed from hands/wrists for the time of classes,*
- *long hair must be tied back*
- *outer coats must be left in the cloakroom downstairs,*
- *protective gowns must be used in the laboratory classroom (brought to the first laboratory class and stored at the Department of Medical Microbiology for the duration of the course),*
- *eating, drinking, smoking (incl. e-cigarettes) is strictly forbidden.*

The resit exam will take place in a resit session. Students will be informed about the date and form of the exam before the summer break.

Students have the opportunity to cooperate scientifically with the Department as part of the activities of Student Scientific Circles (SKN):

1. Microbiology Applied to Clinics and Real life for Students (MACR-S). Supervisors: Dr. Robert Kuthan ([robert.kuthan@wum.edu.pl](mailto:robert.kuthan@wum.edu.pl)), Gabriel Zaremba-Wróblewski, M.D. ([gabrielzaremba@gmail.com](mailto:gabrielzaremba@gmail.com))

2.SKN Mycology "Mucor". Supervisor: Dr. Robert Kuthan ([robert.kuthan@wum.edu.pl](mailto:robert.kuthan@wum.edu.pl))

During the last classes in the summer semester, students have the opportunity to complete the Survey of Evaluation of Classes and Academic Teachers

**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.

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# Parasitology

## 1. IMPRINT

<b>Academic Year</b>	2024/2025
<b>Department</b>	Faculty of Medicine
<b>Field of study</b>	Medicine
<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 General Biology and Parasitology, 5 Chałubińskiego Str., 02-004 Warsaw, tel. +48 22 6212607, e-mail: <a href="mailto:biologia@wum.edu.pl">biologia@wum.edu.pl</a>
<b>Head of Educational Unit / Heads of Educational Units</b>	Ph.D., Professor, Daniel Młocicki
<b>Course coordinator</b>	Ph.D., Associate Professor, Monika Dybicz, e-mail: <a href="mailto:monika.dybicz@wum.edu.pl">monika.dybicz@wum.edu.pl</a>
<b>Person responsible for syllabus</b>	Ph.D., Associate Professor, Monika Dybicz, e-mail: <a href="mailto:monika.dybicz@wum.edu.pl">monika.dybicz@wum.edu.pl</a>
<b>Teachers</b>	Monika Dybicz, Daniel Młocicki, Aleksandra Sędzikowska

## 2. BASIC INFORMATION

<b>Year and semester of studies</b>	III year, winter semester	<b>Number of ECTS credits</b>	2.00
<b>FORMS OF CLASSES</b>			

Contacting hours with academic teacher	Number of hours	ECTS credits calculation
Lecture (L)		
Seminar (S)	10	0.3
Classes (C)	25	0.7
e-learning (e-L)		
Practical classes (PC)		
Work placement (WP)		
<b>Unassisted student's work</b>		
Preparation for classes and completions	35	1.00

<b>3. COURSE OBJECTIVES</b>	
O1	The main objective is to provide necessary information on the biology, physiology and morphology of medically important parasites invading the tissues, organs and systems of the human body.
O2	Transfer of knowledge about current problems of medical parasitology, environmental factors of parasite invasion and dispersion, opportunistic species, pathogenesis and course of parasitic diseases in the states of immunosuppression or immunological defects and epidemiology of parasitic invasions.
O3	Making the future doctor aware of the dangers of parasites occurring in Poland and in the world.
O4	Learning the rules for conducting a correct parasitological interview with the patient.
O5	Introduction of the methods of modern laboratory diagnostics.

<b>4. STANDARDS OF LEARNING – DETAILED DESCRIPTION OF EFFECTS OF LEARNING</b>	
<b>Code and number of the effect of learning in accordance with standards of learning</b>	<b>Effects in the field of:</b> <i>(in accordance with appendix to the Regulation of Minister of Science and Higher education from 26th of July 2019)</i>
<b>Knowledge – Graduate* knows and understands:</b>	
C.W13	Epidemiology of parasitic infections, including the geographical range of their occurrence.
C.W16	Human invasive forms or developmental stages of selected parasitic fungi, protozoa, helminths and arthropods, considering the geographical range of their occurrence.

C.W17	Principle of the parasite system - host and basic disease symptoms caused by parasites.
C.W19	Basics of parasitological diagnostics.

**Skills– Graduate\* is able to:**

C.U6	Evaluate environmental threats and use the basic methods to detect the presence of harmful factors (biological and chemical) in the biosphere (in the field of parasitology).
C.U7	Recognize the most common human parasites on the basis of their structure, life cycles and disease symptoms.
C.U9	Prepare the preparation and recognize pathogens under the microscope (in the field of parasitology).

\* In appendix to the Regulation of Minister of Science and Higher education from 26th of July 2019 „graduate”, not student is mentioned.

**5. ADDITIONAL EFFECTS OF LEARNING (non-compulsory)**

<b>Number of effect of learning</b>	<b>Effects in the fields of:</b>
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**Knowledge – Graduate knows and understands:**

K1	Health education issues.
K2	Rules of conducting the scientific research and disseminating their results.

**Skills– Graduate is able to:**

S1	Carry out diagnostics of parasitic diseases, assess and describe the somatic and mental state of the patient.
S2	Critically evaluate the results of scientific research and properly justify the position.

**Social Competencies – Graduate is ready for:**

SC1	Transfer of knowledge in the society about parasitological threats in the country and during foreign travel, especially to tropical and endemic regions.
SC2	Use of objective sources of information.

**6. CLASSES**

Form of class	Class contents	Effects of Learning
Seminars and practical classes	1. Introduction to parasitology. Host-parasite relationship. Protozoa of the digestive and urogenital system ( <i>Giardia intestinalis</i> , <i>Entamoeba histolytica</i> / <i>E. dispar</i> , <i>E. coli</i> , <i>Endolimax nana</i> , <i>Iodamoeba butchlii</i> , <i>Balantidium coli</i> , <i>Blastocystis hominis</i> , <i>E. gingivalis</i> , <i>Trichomonas tenax</i> , <i>Pentatrichomonas hominis</i> , <i>T. vaginalis</i> ). 2. Cellular and tissue protozoans ( <i>Plasmodium</i> spp., <i>Trypanosoma</i> spp., <i>Leishmania</i> spp., <i>Babesia</i> spp.). 3. Opportunistic and facultative protozoans ( <i>Toxoplasma gondii</i> , <i>Cryptosporidium parvum</i> , <i>Cyclospora cayetanensis</i> , <i>Isospora belli</i> , <i>Sarcocystis</i> spp., <i>Acanthamoeba</i> spp., <i>Naegleria</i> spp.).	C.W13, C.W16, C.W17, C.W19

	<p>4. Flukes of the digestive and circulatory system (<i>Fasciola hepatica</i>, <i>Opisthorchis felinus</i>, <i>Dicrocoelium dendriticum</i>, <i>Fasciolopsis buski</i>, <i>Schistosoma</i> spp.).</p> <p>5. Intestinal tapeworms (<i>Taenia solium</i>, <i>T. saginata</i>, <i>Rodentolepis nana</i>, <i>Hymenolepis diminuta</i>, <i>Dipylidium caninum</i>, <i>Diphyllobothrium latum</i>, <i>Spirometra erinaceieuropaei</i>).</p> <p>6. Nematodes of the gastrointestinal tract (<i>Ascaris lumbricoides</i>, <i>Enterobius vermicularis</i>, <i>Trichuris trichiura</i>, <i>Ancylostoma duodenale</i>, <i>Necator americanus</i>, <i>Strongyloides stercoralis</i>).</p> <p>7. Helminths invading human tissues and organs (<i>Echinococcus granulosus</i>, <i>E. multilocularis</i>, <i>Toxocara canis</i>, <i>Anisakis</i> spp., <i>Trichinella</i> spp.).</p> <p>8. Filariidae (<i>Loa loa</i>, <i>Onchocerca volvulus</i>, <i>Wuchereria bancrofti</i>, <i>Brugia malayi</i>, <i>Dirofilaria repens</i>, <i>Dracunculus medinensis</i>). Helminthotherapy of human autoimmune diseases.</p> <p>9. Parasitic arthropods and pathogen carriers.</p> <p>10. Laboratory diagnostics of parasitic diseases.</p> <p>11. Repetition. Discussing clinical cases.</p> <p>12. Preparation recognition.</p>	

<b>7. LITERATURE</b>
<b>Obligatory</b>
<p>1. Essentials of Medical Parasitology. Apurba Sankar Sastry, Sandhya Bhat K. JP Medical Ltd, 2014.</p> <p>2. Parasitology workbook. Monika Dybic, Aleksandra Sędzikowska, Monika Pliszka. 2024.</p>
<b>Supplementary</b>
Medical Parasitology. Rohela Mahmud, Yvonne Ai Lian Lim, Amirah Amir. Springer, 2018.

<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>
C.W13, C.W16, C.W17, C.W19, C.U6, C.U7, C.U9	Question answer or quiz during classes.	The correct answer to the question.
C.W13, C.W16, C.W17, C.W19, C.U6, C.U7, C.U9	Identification of 3 parasites specimen.	Correct identification of all specimen.
C.W13, C.W16, C.W17, C.W19, C.U6, C.U7, C.U9	Exam in the form of a multiple choice test composed of 50 questions.	Obtaining over 55% points.

<b>9. ADDITIONAL INFORMATION</b>
<p>1. Students are required to prepare for the course, which will be verified by the student's answer or written test.</p> <p>2. Due to contact with invasive material during classes, hygiene instructions should be strictly followed.</p> <p>3. Attendance at all classes is obligatory, attendance should be on time. Abandoned due to illness should be done with another group after prior agreement with the person responsible for the subject.</p>

4. Persons applying for transfer of the subject from previous years or from another university should write an application to the Head of the Department of General Biology and Parasitology and obtain permission of the Faculty Dean.
5. The student can have three attempts to take credit. There are two terms of the final exam.
6. There is Parasitological Scientific Club at the department. For more information contact: [monika.dybicz@wum.edu.pl](mailto:monika.dybicz@wum.edu.pl).

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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.



# Pathomorphology

## 1. IMPRINT

<b>Academic Year</b>	2024/2025
<b>Department</b>	Faculty of Medicine
<b>Field of study</b>	Medicine
<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 Pathology (1M11), 7 Pawińskiego St., 02-004 Warsaw, phone 48 22 599-16-70 / fax 22 599-16-71 e-mail: patomorfologia@wum.edu.pl
<b>Head of Educational Unit / Heads of Educational Units</b>	Agnieszka Perkowska-Ptasińska, MD, PhD
<b>Course coordinator</b>	MD, PhD, Magdalena Bogdańska, e-mail: <a href="mailto:magdalena.bogdanska@wum.edu.pl">magdalena.bogdanska@wum.edu.pl</a>
<b>Person responsible for syllabus</b>	Paweł Pihowicz, e-mail: <a href="mailto:pawel.pihowicz@wum.edu.pl">pawel.pihowicz@wum.edu.pl</a>
<b>Teachers</b>	Magdalena Bogdańska MD, PhD Łukasz Koperski MD, PhD Paweł Pihowicz MD Karol Kulbaka MD

## 2. BASIC INFORMATION

<b>Year and semester of studies</b>	3 rd year, 5 & 6 semester	<b>Number of ECTS credits</b>	17.00
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FORMS OF CLASSES	Number of hours	ECTS credits calculation
<b>Contacting hours with academic teacher</b>		
Lecture (L)	60	4
Seminar (S)	20	3
Classes (C)	107	7
e-learning (e-L)		
Practical classes (PC)		
Work placement (WP)		
<b>Unassisted student's work</b>		
Preparation for classes and completions		

<b>3. COURSE OBJECTIVES</b>	
O1	Pathology focuses on determining the cause and nature of disease
O2	Students will be provided with basic knowledge about the mechanisms of the origin and development of disease and its manifestations in the form of molecular, chemical, physiological and morphological changes
O3	Students will be provided with basic knowledge about how human diseases can be diagnosed
O4	Students will be provided with basic knowledge about procedure and regulations for post-mortem examinations
O5	Students will become familiar with procedures and techniques commonly used by pathology laboratory

<b>4. STANDARDS OF LEARNING – DETAILED DESCRIPTION OF EFFECTS OF LEARNING</b>	
<b>Code and number of the effect of learning in accordance with standards of learning</b>	<b>Effects in the field of:</b> <i>(in accordance with appendix to the Regulation of Minister of Science and Higher education from 26th of July 2019)</i>
<b>Knowledge – Graduate* knows and understands:</b>	
G.K1 C.W26	pathomorphological terminology
G.K2 C.W27	basic mechanisms of cell and tissue damage
G.K3 C.W28	clinical course of inflammatory reactions and repair and the regeneration of tissue and organs



G.K4 C.W30	aetiology of hemodynamic disorders, regressive and progressive changes
G.K5 C.W31	detailed organ specific pathology, macroscopic and microscopic pictures, clinical features of pathological changes in particular organs
G.K6 C.W32	consequences of pathological processes to surrounding organs

**Skills– Graduate\* is able to:**

G.S1 C.U11	connect images of damages to tissues and organs with clinical symptoms of a disease, medical history and results of laboratory tests
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**5. ADDITIONAL EFFECTS OF LEARNING (non-compulsory)**

<b>Number of effect of learning</b>	<b>Effects in the fields of:</b>
-------------------------------------	----------------------------------

**Knowledge – Graduate knows and understands:**

K1	
K2	

**Skills– Graduate is able to:**

S1	
S2	

**Social Competencies – Graduate is ready for:**

SC1	
SC2	

**6. CLASSES**

Form of class	Class contents	Effects of Learning
Practical classes	CLASSES 1. Hemodynamic disorders-1 2. Hemodynamic disorders, thrombosis, atherosclerosis 3. Regressive lesions-1 4. Regressive lesions-2 5. Tissue repair, Neoplasms-1 6. Neoplasms-2 7. Neoplasms-3 8. Neoplasms-4 9. Neoplasms-5 10. Inflammation-1 11. Inflammation-2 12. Endocrine system 13. Heart and respiratory system 14. Oral cavity and GI tract	C.W26, C.W27, C.W28, C.W30, C.W31, C.W32, C.U11

	15. Liver, pancreas and gallbladder 16. Genital system-1 17. Genital system-2 18. Genital system-3 19. The Kidney	
Lectures	1. Pathology- history continues; Regressive lesions 2. Neoplasms - introduction 3. Soft tissue tumors-part 1, 4. Soft tissue tumors- part 2 5. Lymphomas- an overview of some NHLs 6. Tuberculosis 7. Lung cancer 8. Testicular tumors 9. Cystic diseases of the kidney	
SEMINARS	1. Glomerular diseases 2. Tumors of the uterine corpus 3. Gestational trophoblastic disease (GTD) 4. GI tract, liver, pancreas and biliary tract pathology Genital system and kidney pathology 5. Renal Cell Carcinoma (RCC) 6. Diabetes mellitus 7. Neurodegenerative diseases 8. Salivary gland pathology 9. Neoplasms of the stomach 10. Environmental and nutritional pathology	

<b>7. LITERATURE</b>
<b>Obligatory</b>
1. Robbins Basic Pathology, 10th edition, Kumar, Abbas, Aster
<b>Supplementary</b>
1. Robbins and Cotran Review of Pathology, 4th edition 2. Any other recent pathology textbook and atlas

<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>
C.W26, C.W27, C.W28, C.W30, C.W31, C.W32, C.U11	Multiple choice questions (MCQ)	Grading criteria: <50% fail >= 50% pass

<b>9. ADDITIONAL INFORMATION</b>
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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.



## Laboratory Diagnostics

### 1. IMPRINT

<b>Academic Year</b>	2024/2025
<b>Department</b>	Faculty of Medicine
<b>Field of study</b>	Medicine
<b>Main scientific discipline</b>	Medical science
<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 Laboratory Diagnostics and Clinical Immunology of Developmental Age (1WW) 63a Żwirki i Wigury St., 02-091 Warsaw (Pediatric Hospital) Block 2H, second floor +48 22 3179511, 317 95 05 e-mail: <a href="mailto:zdl@wum.edu.pl">zdl@wum.edu.pl</a>

<b>Head of Educational Unit / Heads of Educational Units</b>	Prof. Urszula Demkow
<b>Course coordinator</b>	PhD Małgorzata Wachowska +48 22 317 95 05 e-mail: <a href="mailto:malgorzata.wachowska@wum.edu.pl">malgorzata.wachowska@wum.edu.pl</a>
<b>Person responsible for syllabus</b>	Małgorzata Wachowska +48 22 317 95 05 e-mail: <a href="mailto:malgorzata.wachowska@wum.edu.pl">malgorzata.wachowska@wum.edu.pl</a>
<b>Teachers</b>	PhD Małgorzata Wachowska, PhD Katarzyna Popko, PhD Aneta Manda-Handzlik, PhD Katarzyna Korniluk, PhD Marzena Iwanowska, Eliza Głodkowska-Mrówka, MSc Adrianna Cieloch

## 2. BASIC INFORMATION

<b>Year and semester of studies</b>	III year, 6 <sup>th</sup> semester (summer)	<b>Number of ECTS credits</b>	2.00
<b>FORMS OF CLASSES</b>		<b>Number of hours</b>	<b>ECTS credits calculation</b>
<b>Contacting hours with academic teacher</b>			
Lecture (L)		5	0,2
Seminar (S)		25	1
Classes (C)		15	0,6
e-learning (e-L)			
Practical classes (PC)			
Work placement (WP)			
<b>Unassisted student's work</b>			
Preparation for classes and completions			0,2

## 3. COURSE OBJECTIVES

O1	Present basic knowledge on the organization of clinical laboratory, application of laboratory tests as well as practical aspects of simple procedures and functional tests.
O2	Revise existing knowledge on the biochemistry and physiology of the main organ systems of the human body and help students to transfer theoretical knowledge into practical laboratory medicine setting.

O3	Familiarize students with: proper use of laboratory tests in clinical settings, including point-of-care testing; medical consequences of disease on the major organ systems reflected in lab test results;
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**4. STANDARDS OF LEARNING – DETAILED DESCRIPTION OF EFFECTS OF LEARNING** (*concerns fields of study regulated by the Regulation of Minister of Science and Higher Education from 26 of July 2019; does not apply to other fields of study*)

<b>Code and number of effect of learning in accordance with standards of learning</b>	<b>Effects in the field of:</b> ( <i>in accordance with appendix to the Regulation of Minister of Science and Higher education from 26th of July 2019</i> )
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**Knowledge – Graduate\* knows and understands:**

E.W7	knows causes, symptoms, principles of diagnosis and therapeutic management in relation to the most common internal diseases occurring in adults and their complications
E.W7(3)	knows characteristics of liver disorders, liver and pancreas disorders, and can perform differential diagnostics of jaundices
E.W7(4)	knows carbohydrate metabolism disorders, particularly diabetes, and know how to use laboratory parameters typically utilized in diagnostics and monitoring of patients with metabolic diseases
E.W7(5)	knows which laboratory test should be chosen to diagnose, monitor, and predict renal disorders and how to interpret the results
E.W7(6)	knows principles of hematopoietic system diseases, including bone marrow aplasia, anemia, granulocytopenia and agranulocytosis, thrombocytopenia, acute leukemias, myeloproliferative and myelodysplastic tumors
E.W7(8)	knows causes, symptoms, principles of diagnosis allergic
E.W7(9)	knows principles of Acid-base balance and water-electrolyte balance disorders: states of dehydration, states of fluid overload, electrolyte disturbances, acidosis and alkalosis
E.W39	knows types of biological materials used in laboratory diagnostics and principles of sampling for testing

**Skills– Graduate\* is able to:**

E.U24	can interpret laboratory tests results and identify causes of deviations
E.U28	can collect and protect the principles of blood, urine, CSF, and body fluids for laboratory testing and knows how to interpret the results
E.U29(9)	can perform basic medical procedures including dipstick-tests or capillary blood collection, and glucose measurement in blood

\* In appendix to the Regulation of Minister of Science and Higher education from 26th of July 2019 „graduate”, not student is mentioned.

**5. ADDITIONAL EFFECTS OF LEARNING** (*non-compulsory*)

<b>Number of effect of learning</b>	<b>Effects in the fields of:</b>
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**Knowledge – Graduate knows and understands:**

K1	the term: norm, range of reference values
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K2	the term: diagnostic sensitivity, diagnostic specificity, diagnostic accuracy.
K3	types and characteristics of biological material, rules and methodology of collecting, transporting, storing and preparing it for analysis

**Skills– Graduate is able to:**

S1	determine the diagnostic usefulness of a laboratory test
S2	interpret ranges of reference values and assess the dynamics of changes in parameters laboratory

**Social Competencies – Graduate is ready for:**

SC1	Team-work
SC2	prove the ability and habit of self-education

**6. CLASSES**

Form of class	Class contents	Effects of Learning
Lecture	a) Interferences in laboratory tests b) Basic immunology laboratory techniques c) Cerebrospinal fluid	E.W7.
Seminar	a) Laboratory to laboratory diagnostics of hematological disorders (1) b) Laboratory to laboratory diagnostics of hematological disorders (2) c) Serology of blood groups. Laboratory aspects of transfusion medicine. d) Hemostasis in health and disease e) Analysis of urine and laboratory diagnostic of kidney diseases f) Acid-base balance and water-electrolyte balance g) Introduction to Toxicology: therapeutic drug monitoring and drug of abuse h) Introduction to clinical chemistry, proteins and cancer markers i) Laboratory diagnostics of liver diseases, diabetes and other metabolic disorders. Immunochemistry. j) Cardiac markers	E.W7(3), E.W7(4), E.W7(5), E.W7(6), E.W7(9), E.W39, E.W41
Classes	a) Interpretation of laboratory tests and identification of causes deviations b) Analysis of urine c) Blood collection for analysis of ABB parameters c) Glucose measurement d) Laboratory diagnostic of coagulation disorders, INR determination e) Protein electropherogram analysis f) Blood collection, smear preparation and morphology g) Smear analysis h) Serology of blood groups	E.U12, E.U24, E.U28, E.U29(5), E.U29(9). E.W40

**7. LITERATURE**

**Obligatory**

1. Clinical Chemistry, Bishop M., Fody E., Schoeff L., 2009, Wolters Kluwer
2. Laboratory Medicine: The Diagnosis of Disease in the Clinical Laboratory 2. edition, Laposata M., 2014, Mc Grow Hill Medical.

**Supplementary**

**8. VERIFYING THE EFFECT OF LEARNING**

Code of the course effect of learning	Ways of verifying the effect of learning	Completion criterion
<i>e.g. G.K1, G.S1, K1</i>	<i>This field defines the methods used for grading students e.g. pop quiz, test, written report etc.</i>	<i>e.g. threshold number of points</i>
G.K1-8, GS1-3	Presence at <u>all seminars and all practical classes</u> . Colloquiums from seminars and practical part - MCQ test, open questions, interpretation of diagnostic results	100% presence threshold number of points (15/25 points), passing grade is 60%
G.K1-8, GS1-3	Exam – MCQ test, open questions, interpretation of diagnostic results	threshold number of points (30/50 points), passing grade is 60%

**9. ADDITIONAL INFORMATION** (*information essential for the course instructor that are not included in the other part of the course syllabus e.g. if the course is related to scientific research, detailed description of, information about the Science Club*)

Students are obligated to wear labcoats and have shoes changed. All outer garments should be left in the student's cloakroom (hospital, -1 floor).

Students are obligated to prepare for practical classes

There is no possibility to make up seminars or practical classes.

Students are not allowed to change the group during the seminars as well as practical part.

Students who fail the colloquium test are allowed to have 2 retakes. The retakes are scheduled individually.

The final exam is held in computer rooms, it consist of 50 MCQ questions and the passing grade is 60% (30 questions). Thresholds are as follow:

Grade	Number of points
<b>2</b>	< 29
<b>3</b>	30-33
<b>3,5</b>	34-37
<b>4</b>	38-41
<b>4,5</b>	42-45
<b>5</b>	46-50

Students who fail the exam at first term are allowed to retake it during autumn exam session. Students who fail the second term can have commission exam.

Any concerns should be directed to the coordinator of the subject only after making an appointment by email.

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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.





# Radiology

## 1. IMPRINT

<b>Academic Year</b>	2024/2025
<b>Department</b>	Faculty of Medicine
<b>Field of study</b>	Medicine
<b>Main scientific discipline</b>	Medical science
<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 Radiology Laboratory of Ultrasound Diagnostics (WLS18A) Mazowiecki Bródnowski Hospital, 8 Kondratowicza Street; phone 48 22 326 58 10 e-mail: <a href="mailto:zdo@wum.edu.pl">zdo@wum.edu.pl</a>
<b>Head of Educational Unit / Heads of Educational Units</b>	dr Mariusz Furmanek, MD, PhD
<b>Course coordinator</b>	Assoc Prof Bartosz Migda MD, PhD e-mail: <a href="mailto:bartosz.migda@wum.edu.pl">bartosz.migda@wum.edu.pl</a>
<b>Person responsible for syllabus</b>	Assoc Prof Rafał Słapa MD, PhD e-mail: <a href="mailto:rafal.slapa@wum.edu.pl">rafal.slapa@wum.edu.pl</a>
<b>Teachers</b>	Assoc. Prof. Bartosz Migda MD, PhD; Assoc. Prof. Ewa Biątek, Dr Dominik Nguyen, Dr Remigiusz Krysiak, Dr Michał Kutylowski, Dr Mateusz Kryczka, Dr Grzegorz Bienia, Dr Katarzyna Prostacka, Dr Patrycja Bielska

## 2. BASIC INFORMATION

<b>Year and semester of studies</b>	III year winter, 5 <sup>th</sup> semester	<b>Number of ECTS credits</b>	4.00
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FORMS OF CLASSES	Number of hours	ECTS credits calculation
<b>Contacting hours with academic teacher</b>		
Lecture (L)	10	0.4
Seminar (S)	15	0.6
Classes (C)	47	1.88
e-learning (e-L)		
Practical classes (PC)		
Work placement (WP)		
<b>Unassisted student's work</b>		
Preparation for classes and completions	28	1.12

<b>3. COURSE OBJECTIVES</b>	
O1	To acquaint students with conventional X-ray and ultrasound examinations.
O2	To acquaint students with modern advanced imaging techniques MR, CT.
O3	To teach students the basic skills to perform ultrasound which is the stethoscope of modern doctor.

<b>4. STANDARDS OF LEARNING – DETAILED DESCRIPTION OF EFFECTS OF LEARNING (concerns fields of study regulated by the Regulation of Minister of Science and Higher Education from 26 of July 2019; does not apply to other fields of study)</b>	
<b>Code and number of the effect of learning in accordance with standards of learning</b>	<b>Effects in the field of:</b> <i>(in accordance with appendix to the Regulation of Minister of Science and Higher education from 26th of July 2019)</i>
<b>Knowledge – Graduate* knows and understands:</b>	
G.K1 – B.W8	Physical rudiments of non-invasive imaging methods
G.K2 – F.W10 p. 1-3	Issues concerning contemporary applied imaging tests, particularly: <ol style="list-style-type: none"> <li>1) Radiological symptomatology of basic diseases,</li> <li>2) Instrumental methods and imaging techniques applied for medical procedures,</li> <li>3) Indications, contraindications and preparation of the patient for individual types of imaging examinations and contraindications for contrast agents application;</li> </ol>
<b>Skills– Graduate* is able to:</b>	

G.S1 – A.U4	Deduce on the relation between the anatomical structures on the basis of in vivo diagnostic tests, particularly in the scope of radiology (ultrasound, x-ray, imaging with contrast agents, computed tomography and magnetic resonance imaging)
G.S2 – B.U2	To evaluate the harmfulness of ionizing radiation dose and apply the radiation protection rules
G.S3 – F.U7	Evaluate the result of imaging examination in regard to the most common types of fractures, especially fractures of long bones;
G.S4	Getting acquainted with the issues concerning contemporary applied imaging tests, acquires the basic of practical skill to use the contemporary stethoscope – ultrasonography.

\* In appendix to the Regulation of Minister of Science and Higher education from 26th of July 2019 „graduate”, not student is mentioned.

<b>5. ADDITIONAL EFFECTS OF LEARNING (non-compulsory)</b>	
<b>Number of effect of learning</b>	<b>Effects in the fields of:</b>
<b>Knowledge – Graduate knows and understands:</b>	
K1	
K2	
<b>Skills– Graduate is able to:</b>	
S1	
S2	
<b>Social Competencies – Graduate is ready for:</b>	
SC1	
SC2	

<b>6. CLASSES</b>		
<b>Form of class</b>	<b>Class contents</b>	<b>Effects of Learning</b>
L, S, PC	<p>LECTURES</p> <p>Imaging of Patients from ED – selected issues</p> <p>Neck Ultrasound – selected issues</p> <p>Contrast enhanced ultrasound (CEUS) – selected issues</p> <p>Ultrasound – stethoscope of modern medical professional – selected issues</p> <p>Imaging of Endocrine Glands – selected issues</p> <p>SEMINARS</p> <p>Introduction to medical imaging (Physics!) Hazards and precautions in medical imaging (contrast media, radiation hazards, MRI issues)</p> <p>Cardiovascular system. Emergencies in cardiovascular system</p> <p>Head and Neck (soft tissues, glands in the neck, cervical spine).</p> <p>Central nervous system + spinal cord. Emergencies in CNS</p>	G.K1, G.K2, G.S1, G.S2, G.S3, G.S4

	<p>Radiological Anatomy (abdominal cavity in CT, MRI). Pathologies in abdominal cavity in CT, MRI</p> <p>How to read abdomen X-ray. Acute abdomen. Abdominal cavity in US (anatomy and pathology). Gastrointestinal tract. Emergencies in GI tract</p> <p>Musculoskeletal system. Skeletal trauma</p> <p>How to read chest X-ray. Diagnostic of the chest. Emergencies in the chest</p> <p>Urinary tract and the male reproductive system. Emergencies in urinary tract and male reproductive system</p> <p>Female reproductive system. Emergencies in female reproductive system</p> <p>Breast imaging (US, Mammography, MRI)</p> <p>Vascular System (peripheral arteries and veins, thoracic and abdominal aorta in US, CT, MRI). Emergencies in vascular diseases</p> <p>Multiorgan Trauma</p> <p><b>WORKSHOPS</b></p> <p>Ultrasound : introduction, basics, demonstration of US exam, Abdomen B-mode, doppler- vessels</p> <p>US neck, extremities</p> <p>CT</p> <p>MRI</p>	
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<b>7. LITERATURE</b>
<b>Obligatory</b>
<ol style="list-style-type: none"> <li>1. D. Lisle Imaging for Students. Hodder Education, 2007.</li> <li>2. Gibson R, et al.: Essential Medical Imaging. Cambridge University Press, 2009.</li> <li>3. Brant William E., Helms Clyde A.; Fundamentals of diagnostic radiology; Lippincott Williams &amp; Wilkins, 2006</li> <li>4. Core Radiology Second Edition; Ellen X.Sunm Junzi Shi, Jacob C.Mandell.</li> </ol>
<b>Supplementary</b>
<ol style="list-style-type: none"> <li>1. Daffner R., et al.: Clinical Radiology. Lippincott Williams &amp; Wilkins, 2007.</li> <li>2. Vilensky J. et al.: Medical Imaging of Normal and Pathologic Anatomy. WB Saunders Company, 2010.</li> <li>3. Suetens P.: Fundamentals of Medical Imaging, Cambridge University Press, 2009.</li> </ol>

<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>
<i>e.g. G.K1, G.S1, K1</i>	<i>This field defines the methods used for grading students e.g. pop quiz, test, written report etc.</i>	<i>e.g. threshold number of points</i>
<i>G.K1, G.K2, G.S1, G.S2, G.S3, G.S4</i>	<i>test</i>	<i>pass an exam, &gt;59%</i>

<b>9. ADDITIONAL INFORMATION</b>
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- 1) Seminars and Workshops take place in Diagnostic Ultrasound Lab, Bródnowski Hospital, 8 Kondratowicza Street, building B. A few seminars (specified in the timetable) take place in Banacha campus.
- 2) Lectures take place on-line MS Teams.
- 3) Acceptable 2 tries for exam admission passes
- 4) The final exam consists of multiple choice questions (only one answer correct).
- 5) Students who failed the Final Exam are obliged to retake the test.
- 6) The final scores of the final exam are not changeable.
- 7) The scores of the failed final exam and the retake will be confirmed by a signature in the Student Book as two separated scores but not as the mean of these two.

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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.



## Polish for medicine – communication skills in medicine

<b>1. IMPRINT</b>			
<b>Academic Year</b>	2024/2025		
<b>Department</b>	Faculty of Medicine		
<b>Field of study</b>	Medicine		
<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>	Foreign Language Department The Didactic Center, ul. Trojdena 2a, 02-109 Warsaw <a href="mailto:sjosekretariat@wum.edu.pl">sjosekretariat@wum.edu.pl</a> , tel. 22 5720863 <a href="http://www.sjo.wum.edu.pl/">www.sjo.wum.edu.pl/</a>		
<b>Head of Educational Unit / Heads of Educational Units</b>	Maciej Ganczar, PhD, Professor at MUW e-mail: <a href="mailto:maciej.ganczar@wum.edu.pl">maciej.ganczar@wum.edu.pl</a>		
<b>Course coordinator</b>	Anna Maczkowska, MA <a href="mailto:anna.maczkowska@wum.edu.pl">anna.maczkowska@wum.edu.pl</a>		
<b>Person responsible for syllabus</b>	Anna Maczkowska, MA e-mail: <a href="mailto:anna.maczkowska@wum.edu.pl">anna.maczkowska@wum.edu.pl</a>		
<b>Teachers</b>	Anna Maczkowska, MA		
<b>2. BASIC INFORMATION</b>			
<b>Year and semester of studies</b>	3 <sup>rd</sup> , 1 <sup>st</sup> and 2 <sup>nd</sup> semester	<b>Number of ECTS credits</b>	3.00

FORMS OF CLASSES	Number of hours	ECTS credits calculation
<b>Contacting hours with academic teacher</b>		
Lecture (L)		
Seminar (S)		
Classes (C)	60	2
e-learning (e-L)		
Practical classes (PC)		
Work placement (WP)		
<b>Unassisted student's work</b>		
Preparation for classes and completions	50	1

### 3. COURSE OBJECTIVES

O1	The third year Polish language course is designed to improve the students' command of the medical language skills and practise history taking and giving instructions to the patient in definite clinical situations.
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### 4. STANDARDS OF LEARNING – DETAILED DESCRIPTION OF EFFECTS OF LEARNING

<b>Code and number of the effect of learning in accordance with standards of learning</b>	<b>Effects in the field of:</b> <i>(in accordance with appendix to the Regulation of Minister of Science and Higher education from 26th of July 2019)</i>
<b>Knowledge – Graduate* knows and understands:</b>	
D.W6	the importance of verbal and non-verbal communication in the process of communicating with the patient and the concept of trust in interaction with the patient.
<b>Skills– Graduate* is able to:</b>	
D.U18	communicate with the patient in one of the foreign languages at B2+ level of the Common European Framework of Reference for Languages

\* In appendix to the Regulation of Minister of Science and Higher education from 26th of July 2019 „graduate”, not student is mentioned.

### 5. ADDITIONAL EFFECTS OF LEARNING (non-compulsory)

<b>Number of effect of learning</b>	<b>Effects in the fields of:</b>
-------------------------------------	----------------------------------

**Knowledge – Graduate knows and understands:**

K1	the names of the most common diseases and their symptoms in Polish language
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**Skills– Graduate is able to:**

S1	conduct a basic bedside conversation and a more detailed conversation with patients affected by the diseases discussed during the 3 <sup>rd</sup> year Polish language course (i.e. ask and answer questions during the medical interview (pertaining to personal history, history of the presenting complaint, past history, family history, drug history, social history, systemic inquiry)
S2	give instructions for the clinical examination of adult and paediatric patients and explain the doctor's intentions
S3	inform the patient as to what diagnostic investigations need to be done.

**Social Competencies – Graduate is ready for:**

SC1	continually broadening their knowledge
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**6. CLASSES**

Form of class	Class contents	Effects of Learning
C1/2	Discussing the syllabus (the course content, learning outcomes and the methods of their verification; rules and regulations; credit receiving criteria). Instructions for the clinical examination of adults and children (revision) • Explaining the doctor's intentions to the patient (revision) • The medical interview: personal history, chief complaint, past history, family history, drug history, social history, systemic inquiry (revision)	D.W6, D.U18 K1 S1, S2, S3 SC1
C 3/4	Diseases of the cardiovascular system: symptoms and signs • Diagnostic investigations • The <i>trzeba/można</i> + infinitive construction; the doctor's questions and the patient's answers pertaining to the diseases of the cardiovascular system • Pain: location, radiation, onset (timing, setting), previous similar pain, duration, character, severity, aggravating and relieving factors, associated symptoms • Physical examination	D.W6, D.U18 K1 S1, S2, S3 SC1
C 5	Ischaemic heart disease and myocardial infarction: taking history / physical examination (dialogues)	D.W6, D.U18 K1 S1, S2, S3, SC1
C 6	Hypertension: taking a history / physical examination (dialogues) /Revision (diseases of the cardiovascular system)	D.W6, D.U18 K1 S1, S2, S3, SC1
C 7/8	• Diseases of the respiratory system: symptoms and signs • case taking: the doctor's questions and the patient's answers pertaining to the diseases of the respiratory system • Diagnostic investigations • Physical examination Pneumonia: taking a history / physical examination (dialogues)	D.W6, D.U18 K1 S1, S2, S3 SC1
C 9/10	Asthma: taking a history / physical examination (dialogues)	D.W6, D.U18 K1



	Revision (diseases of the respiratory system. Intermediate test 1	S1, S2, S3 SC1
C 11/12	Diseases of the digestive system: symptoms and signs • doctor's questions and the patient's answers pertaining to the diseases of the digestive system • Diagnostic investigations • Physical examination Peptic ulcers: taking a history / physical examination (dialogues)	D.W6, D.U18 K1 S1, S2, S3 SC1
C 13/14	Cholelithiasis: taking a history / physical examination (dialogues) Appendicitis: case description.	D.W6, D.U18 K1 S1, S2, S3, SC1
C 15	Revision: diseases of the digestive system. Intermediate test 2.	D.W6, D.U18 K1 S1, S2, S3, SC1
D 16/17	Diseases of the urinary system: symptoms and signs • doctor's questions and the patient's answers pertaining to the diseases of the urinary system • Diagnostic investigations • Physical examination Nephrolithiasis: taking a history / physical examination (dialogues)	D.W6, D.U18 K1 S1, S2, S3 SC1
C18/19	Cystitis: taking history / physical examination (dialogues) Revision (diseases of the urinary system) • Diseases of the male reproductive system: symptoms and signs • doctor's questions and the patient's answers pertaining to the diseases of the reproductive system • Diagnostic investigations • Physical examination	D.W6, D.U18 K1 S1, S2, S3 SC1
C 20/21	Benign prostatic hyperplasia: taking a history / physical examination (dialogues). Intermediate test 3.	D.W6, D.U18 K1 S1, S2, S3, SC1
C22/23	The female reproductive system: symptoms and signs • doctor's questions and the patient's answers pertaining to the diseases of the reproductive system. Breast cancer and endometrial hyperplasia: taking a history / physical examination (dialogues)	D.W6, D.U18 K1 S1, S2, S3 SC1
C24/25	Diseases of the nervous system: symptoms and signs • The medical interview: the doctor's questions and the patient's answers pertaining to the diseases of the nervous system • Diagnostic investigations • Physical examination	D.W6, D.U18 K1 S1, S2, S3 SC1
C26/27	Stroke: taking a history / physical examination (dialogues). Diseases of the nervous system: revision.	D.W6, D.U18 K1 S1, S2, S3, SC1
C28/29	Diseases of the locomotor system: symptoms and signs • doctor's questions and the patient's answers pertaining to the diseases of the locomotor system. Fracture of the neck of the femur: taking a history / physical examination (dialogue). General revision	D.W6, D.U18 K1 S1, S2, S3, SC1
C30	Intermediate test 4	D.W6, D.U18 K1 S1, S2, S3, SC1

## 7. LITERATURE

### Obligatory

Maria Janowska, Świetlana Sikorska "Proszę oddychać! Część III, Warszawski Uniwersytet Medyczny  
Handouts prepared by the teachers

**8. VERIFYING THE EFFECT OF LEARNING**

Code of the course effect of learning	Ways of verifying the effect of learning	Completion criterion
D.U18, D.W6	Written exam. Oral exam.	<p>To successfully complete the Polish language course, a student needs to obtain credit for the 3<sup>rd</sup> year coursework and pass the final examination covering the 1<sup>st</sup>, 2<sup>nd</sup>, and 3<sup>rd</sup> year coursework.</p> <p>To obtain credit for the 3<sup>rd</sup> year Polish language course, a student is required to:</p> <ul style="list-style-type: none"> <li>• attend all classes (min. 13 out of 15 in a semester)</li> </ul> <p>A student who misses more than 2 classes per semester without a valid excuse will not receive course credits and will not be allowed to sit the course final exam.</p> <p>The only valid excuse for absence is illness. Absences due to illness will be excused on presentation of a valid medical note within one week of return to study.</p> <p>The student is obliged to make up for each absence (excused or unexcused) by performing a special written/oral task assigned by the teacher OR by attending a class with another group (on teacher's permission). If a student misses a class, she/he must catch up on the missed material. It is the student's responsibility to communicate with the class teacher as soon as possible about any attendance issues.</p> <ul style="list-style-type: none"> <li>• come to classes punctually</li> </ul> <p>If a student arrives less than 15 minutes late three times per semester, it will count as one absence. Arriving to class more than 15 minutes late is counted as an absence.</p> <ul style="list-style-type: none"> <li>• actively participate in each class</li> <li>• complete all the assignments by the due date</li> <li>• pass the progress test during the 1<sup>st</sup> and the 2<sup>nd</sup> semester</li> </ul> <p>A student who misses a scheduled test will receive a score of 0 (which equals failing) unless she/he notifies the class teacher of the reason for her/his failure to take the test within three days of the scheduled test date and makes up the missed test if the reason is justified at the date set by the class teacher.</p> <p>A student who fails the course tests can attempt two retakes. A student who fails any of the progress tests at the third attempt needs to repeat the course.</p> <p>After obtaining credit for the 3<sup>rd</sup> year coursework, a student is eligible to take the final examination, consisting of a written and oral part, in the summer examination session. A minimum score of 60% must be received for each part to pass the examination. The final examination grade is the average (arithmetic mean) of the two (written and oral) examination grades (percentage scores) or a grade of 3 for passing a retake.</p>

		<p>The dates of the final written and oral parts of the examination are set by the Course Coordinator and the Dean's Office. The document 'Rules of Studies of the Medical University of Warsaw' describes the examination rules and procedures which will apply to the Polish final examination.</p> <p>The scale of grades is as follows:</p> <table data-bbox="876 472 1243 658"> <tr> <td>2.0 (failed)</td> <td>Below 60%</td> </tr> <tr> <td>3.0 (satisfactory)</td> <td>60-69%</td> </tr> <tr> <td>3.5 (rather good)</td> <td>70-79%</td> </tr> <tr> <td>4.0 (good)</td> <td>80-85%</td> </tr> <tr> <td>4.5 (more than good)</td> <td>86-90%</td> </tr> <tr> <td>5.0 (very good)</td> <td>91-100%</td> </tr> </table>	2.0 (failed)	Below 60%	3.0 (satisfactory)	60-69%	3.5 (rather good)	70-79%	4.0 (good)	80-85%	4.5 (more than good)	86-90%	5.0 (very good)	91-100%
2.0 (failed)	Below 60%													
3.0 (satisfactory)	60-69%													
3.5 (rather good)	70-79%													
4.0 (good)	80-85%													
4.5 (more than good)	86-90%													
5.0 (very good)	91-100%													

## 9. ADDITIONAL INFORMATION

All detailed information about the course completion criteria and rules are listed in the Rules and Regulations of the Centre for Foreign Languages <https://sjo.wum.edu.pl/node/449>

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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.



# ONCOGENETICS

## 1. IMPRINT

<b>Academic Year</b>	2024/2025
<b>Department</b>	Faculty of Medicine
<b>Field of study</b>	Medicine
<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>	Completion
<b>Educational Unit / Educational Units</b>	Department of Tumor Biology and Genetics Medical University of Warsaw 7 Pawińskiego Str. 02-106 Warsaw, Poland Email: <a href="mailto:onkogenetyka@wum.edu.pl">onkogenetyka@wum.edu.pl</a> Phone: 48 22 599-1670
<b>Head of Educational Unit / Heads of Educational Units</b>	Prof. Tomasz Stokłosa, MD, PhD <a href="mailto:tomasz.stoklosa@wum.edu.pl">tomasz.stoklosa@wum.edu.pl</a>
<b>Course coordinator</b>	Prof. Tomasz Stokłosa, MD, PhD <a href="mailto:tomasz.stoklosa@wum.edu.pl">tomasz.stoklosa@wum.edu.pl</a>
<b>Person responsible for syllabus</b>	Prof. Tomasz Stokłosa, MD, PhD <a href="mailto:tomasz.stoklosa@wum.edu.pl">tomasz.stoklosa@wum.edu.pl</a>
<b>Teachers</b>	Prof. Tomasz Stokłosa, MD, PhD, e-mail: <a href="mailto:tomasz.stoklosa@wum.edu.pl">tomasz.stoklosa@wum.edu.pl</a> Marcin Machnicki, PhD, e-mail: <a href="mailto:mmachnicki@wum.edu.pl">mmachnicki@wum.edu.pl</a> Anna Pastwińska, PhD, e-mail: <a href="mailto:anna.pastwinska@wum.edu.pl">anna.pastwinska@wum.edu.pl</a>

## 2. BASIC INFORMATION

<b>Year and semester of studies</b>	III year, 5 semester	<b>Number of ECTS credits</b>	1.00
<b>FORMS OF CLASSES</b>		<b>Number of hours</b>	<b>ECTS credits calculation</b>
<b>Contacting hours with academic teacher</b>			
Lecture (L)			
Seminar (S)	10; including 2 seminars via e-learning	0,5	
Classes (C)	3	0,2	
e-learning (e-L)			
Practical classes (PC)			
Work placement (WP)			
<b>Unassisted student's work</b>			
Preparation for classes and completions	6	0,3	

<b>3. COURSE OBJECTIVES</b>	
O1	Students will be provided with basic knowledge of the role of genetic research in modern oncology and molecularly targeted therapy
O2	Students will be provided with general knowledge about modern methods of genetic research used in oncology and hemato-oncology
O3	Students will be provided with competence in the selection of an appropriate molecular technique and commissioning an appropriate genetic test to search for a genetic defect

<b>4. STANDARDS OF LEARNING – DETAILED DESCRIPTION OF EFFECTS OF LEARNING</b>	
<b>Code and number of the effect of learning in accordance with standards of learning</b>	<b>Effects in the field of:</b> <i>(in accordance with appendix to the Regulation of Minister of Science and Higher education from 26th of July 2019)</i> C.W4, C.W7, C.W9, C.W11, C.U3
<b>Knowledge – Graduate* knows and understands:</b>	
C.W4	The graduate knows and understands the structure of chromosomes and the molecular basis of mutagenesis

C.W7	The graduate knows and understands aberrations of autosomes and heterosomes, which are the cause of diseases, including oncogenesis and cancer
C.W9	The graduate knows and understands the basic methods of genetic diagnostics of point and large mutations, implicated in cancer
C.W11	The graduate knows and understands genetic mechanisms of drug resistance by tumor cells

**Skills– Graduate\* is able to:**

C.U3	The graduate is able to make decisions about the need to perform cytogenetic and molecular tests
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\* In appendix to the Regulation of Minister of Science and Higher education from 26th of July 2019 „graduate”, not student is mentioned.

**5. ADDITIONAL EFFECTS OF LEARNING (non-compulsory)**

Number of effect of learning	Effects in the fields of:
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**Knowledge – Graduate knows and understands:**

K1	The graduate knows and understands the basics of early cancer detection and the principles of screening in oncology
K2	The graduate knows and understands the principles of collecting material for toxicological and hemogenetic tests
K3	

**Skills– Graduate is able to:**

S1	The graduate is able to use databases, including the Internet, and search for the necessary information with the available tools
S2	

**Social Competencies – Graduate is ready for:**

SC1	
SC2	

**6. CLASSES**

Form of class	Class contents	Effects of Learning
Seminars	Seminar 1 ( <b>e-learning platform</b> ) self-completed before the course - Introduction to oncogenetics. Carcinogenesis, oncogenes and suppressor genes. Types of genetical aberrations in tumors.	CW4
	Seminar 2 - The most important advances in cancer genetic research in the last decade. A brief history of cancer genetics research from Rous sarcoma virus to targeted therapy and personalized oncology. Introduction to precision oncology, terms such as “actionable mutations”, “tumor profiling”, “tumor mutational burden”.	C.W4; C.W7, C.W11
	Seminar 3- Hereditary cancers: genetic predisposition to cancer development; recommendations for diagnostics and prevention.	C.W7; C.W9; K1

	<p>Selected cases and genetic testing revealing the genetic basis of hereditary cancers.</p> <p>Seminar 4- Sporadic cancers: molecular targets for personalized medicine and application of high-throughput analyses. Integration of molecular data in diagnostics, tumors classification and targeted treatment.</p> <p>Seminar 5 - The importance of genetic tests in modern hematooncological diagnostics on the example of selected myeloid and lymphoid neoplasms.</p> <p>Analysis of test results on clinical examples, interpretation of the obtained results with the use of available databases.</p>	<p>C.W7; C.W9; C.W11, K2</p> <p>C.W9; C.U3</p>
Practical classes	<p>1. Diagnosis of hematologic malignancies based on molecular techniques. From blood smear/ bone marrow smear to single gene analysis in differential diagnosis of hematologic malignancies.</p> <p>Basic methods in molecular biology used in hemato-oncology: blood/bone marrow collection, extraction of nucleic acids, RT-PCR, RT-qPCR, fragment analysis, Sanger sequencing, ddPCR.</p>	C.W9; C.W11, C.U3

## 7. LITERATURE

### Obligatory

The molecular basis of cancer, Hahn WC, Weinberg, RA, 2015 (selected chapters)

### Supplementary

Selected publications and guidelines articles available in the e-learning platform as an integral part of the course

## 8. VERIFYING THE EFFECT OF LEARNING

Code of the course effect of learning	Ways of verifying the effect of learning	Completion criterion
C.W4 C.W7 C.W9 C.W11 C.U3	<p>Checking the preparation for the seminars and practical classes. Getting familiar with the content posted on the e-learning platform.</p> <p>Active participation in ALL seminars and practical classes.</p> <p>MCQ test (1<sup>st</sup> term and 2<sup>nd</sup> term) – 20 questions</p>	<p>Passing modules with short questions and quizzes on the e-learning platform.</p> <p>Positive evaluation by the teacher.</p> <p>Passing threshold: &lt;60% fail ≥60% pass</p>

## 9. ADDITIONAL INFORMATION

The subject is closely related to genetic research conducted at the Medical University of Warsaw and diagnostically to the UCK Medical University of Warsaw. The presented clinical cases are examples from our own research and diagnostics activity.

Classes are held in weekly blocks from Monday to Friday in winter semester.

The course's detailed rules and the detail plan will available on the website:

<https://onkogenetyka.wum.edu.pl/en>

two weeks before first classes.

In order to complete the course and enter the colloquium all activities on e-learning need to be completed, as well as active participation in all seminars and classes. The colloquium is organized by the Exam Bureau with the use of computer rooms of the Teaching Center, 1<sup>st</sup> term is usually in the week before winter session. The test consists of 20 MCQ questions.

In case of failure to obtain credit in two terms, the student has the option of applying for a commission term (with the consent of the Head of the Department). The final 3<sup>rd</sup> term (commission) may be conducted either as a test or oral and in accordance with the rules of examinations and credits of the Medical University of Warsaw

CONSULTATIONS are possible after making an appointment with the teacher via e-mail.

Student's scientific group is active in the Department.

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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.





# Introduction to Internal Medicine

<b>1. IMPRINT</b>	
<b>Academic Year</b>	2024/2025
<b>Department</b>	Faculty of Medicine
<b>Field of study</b>	Medicine
<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>	credit
<b>Educational Unit / Educational Units</b>	<ol style="list-style-type: none"> <li>1. Department of Endocrinology, Diabetology and Internal Diseases (2W4); Mazovian Bródnowski Hospital, Kondratowicza 8, 03-242 Warsaw e-mail: <a href="mailto:endodiab@wum.edu.pl">endodiab@wum.edu.pl</a></li> <li>2. Department of Immunology, Transplantology and Internal Diseases (1W21) , 59 Nowogrodzka St. 02-006 Warsaw, ph: 48 22 502-16-41, e-mail: <a href="mailto:klunikimmunologii@wum.edu.pl">klunikimmunologii@wum.edu.pl</a></li> </ol>
<b>Head of Educational Unit / Heads of Educational Units</b>	<ol style="list-style-type: none"> <li>1. Prof. Przemysław Witek, MD, PhD (2W4)</li> <li>2. Prof. Leszek Pączek, MD, PhD (1W21)</li> </ol>
<b>Course coordinator</b>	<ol style="list-style-type: none"> <li>1. (2W4) Paweł Kuca MD, PhD, e-mail: <a href="mailto:pawel.kuca@wum.edu.pl">pawel.kuca@wum.edu.pl</a></li> <li>2. (1W21) Tomasz Pilecki MD, PhD,, e-mail: <a href="mailto:tomasz.pilecki@wum.edu.pl">tomasz.pilecki@wum.edu.pl</a></li> </ol>
<b>Person responsible for syllabus</b>	Paweł Kuca MD, PhD, e-mail: <a href="mailto:pawel.kuca@wum.edu.pl">pawel.kuca@wum.edu.pl</a>
<b>Teachers</b>	2W4: Przemysław Witek, MD, PhD Marek Kowrach, MD, PhD Paweł Kuca, MD, PhD Roman Kuczerowski, MD, PhD Patrycja Adamek, MD

	Olga Gajek-Daszczynska, MD Aleksandra Dubiel, MD Agnieszka Maksymiuk-Kłos, MD Justyna Nowak, MD Magdalena Poteraj, MD Joanna Sobolewska, MD Agnieszka Wojciechowska – Luźniak, MD Zuzanna Żak, MD <b>1W21:</b>
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<b>2. BASIC INFORMATION</b>			
<b>Year and semester of studies</b>	III year, 5 & 6 winter/summer semester	<b>Number of ECTS credits</b>	5.00
<b>FORMS OF CLASSES</b>		<b>Number of hours</b>	<b>ECTS credits calculation</b>
<b>Contacting hours with academic teacher</b>			
Lecture (L)		10	1
Seminar (S)		20	1
Classes (C)		70	1.5
e-learning (e-L)			
Practical classes (PC)			
Work placement (WP)			
<b>Unassisted student's work</b>			
Preparation for classes and completions		40	1.5

<b>3. COURSE OBJECTIVES</b>	
O1	Ability to take medical history and perform an effective physical examination.
O2	Ability to conduct differential diagnosis and to use a proper diagnostic path.
O3	Interpretation of basic laboratory results and imaging studies.

<b>4. STANDARDS OF LEARNING – DETAILED DESCRIPTION OF EFFECTS OF LEARNING</b>	
<b>Code and number of the effect of learning in</b>	<b>Effects in the field of:</b> <i>(in accordance with appendix to the Regulation of Minister of Science and Higher education from 26th of July 2019)</i>

<b>accordance with standards of learning</b>	E.W1, E.W7 points: 1, 2, 3, 4, 5, 6, 7, 8, 9, E.W40, E.W41, E.U1, E.U3, E.U7, E.U12, E.U13, E.U14, E.U16, E.U18, E.U24, E.U38
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**Knowledge – Graduate\* knows and understands:**

G.K1	knows and understands principles of history taking and physical examination (E.W7 points: 1, 2, 3, 4, 5, 6, 7, 8, 9)
G.K2	knows the typical, common symptoms and signs which are the cause of consultation and admissions to the internal wards, knows how to obtain a proper diagnosis (E.W1, E.W7 points: 1, 2, 3, 4, 5, 6, 7, 8, 9)
G.K3	knows and understands interpretation of laboratory values and others basic tests (E.W7 points 4, 6, 9, E.W40, E.W41)

**Skills– Graduate\* is able to:**

G.S1	take history and perform physical examination of patients admitted to the internal wards (E.U1, E.U3, E.U7, E.U13)
G.S2	interpret laboratory tests and imaging studies (E.U24)
G.S3	provide differential diagnosis (E.U12)
G.S4	plan diagnostic procedures and treatment (E.U16)
G.S5	prepare and analyse clinical cases (E.U13, E.U38)
G.S6	present a case to other physician, consult relevant abnormalities in laboratory and imaging tests (E.U13, E.U14, E.U16, E.U18)

\* In appendix to the Regulation of Minister of Science and Higher education from 26th of July 2019 „graduate”, not student is mentioned.

**5. ADDITIONAL EFFECTS OF LEARNING (NON-COMPULSORY)**

<b>Number of effect of learning</b>	<b>Effects in the fields of:</b>
-------------------------------------	----------------------------------

**Knowledge – Graduate knows and understands:**

K1	
K2	

**Skills– Graduate is able to:**

S1	
S2	

**Social Competencies – Graduate is ready for:**

SC1	
SC2	

**6. CLASSES**

Form of class	Class contents	Effects of Learning
Bedside classes	<p>Training of practical issues connected with taking history, signs and symptoms assessment.</p> <p>Training of basic practical procedures.</p> <p>Training of differential diagnosis.</p> <p>Interpretation of basic lab tests, imaging studies and basics of ECG.</p>	E.U1, E.U3, E.U7, E.U12, E.U13, E.U14, E.U16, E.U24, E.U38
Seminars	<ol style="list-style-type: none"> <li>1. History taking</li> <li>2. Physical examination</li> <li>3. Cardiovascular system – history taking and physical examination</li> <li>4. Cardiovascular system – cardiac imaging and catheterization</li> <li>5. Respiratory system – history taking and physical examination</li> <li>6. Gastrointestinal system – history taking and physical examination</li> <li>7. Renal medicine – history taking and physical examination</li> <li>8. Endocrinology – clinical presentations of selected endocrinopathies (thyrotoxicosis, hypothyroidism, Cushing’s syndrome, Addison’s disease, acromegaly, hyperandrogenism and hypopituitarism)</li> <li>9. Neurology – history taking and physical examination, some common presentations</li> <li>10. Laboratory tests: some major disease patterns; fluid balance and basic principles of IV fluid therapy</li> <li>11. Diabetes mellitus – classification, presentation, diagnosis</li> <li>12. Arterial hypertension – classification, presentation, diagnosis and management</li> <li>13. The musculoskeletal system – history taking and physical examination</li> <li>14. Diseases of the gastrointestinal tract</li> <li>15. Haematology – the components of a physical examination</li> <li>16. Heart failure – basic concepts and management</li> <li>17. ECG – a methodical approach and ECG abnormalities</li> <li>18. Pneumonia – presentation, diagnosis and management</li> <li>19. Acute kidney injury and chronic kidney failure</li> <li>20. Gastrointestinal bleeding – causes, symptoms and management; endoscopic procedures</li> </ol>	E.W1, E.W7 points: 1, 2, 3, 4, 5, 6, 7, 8, 9, E.W40, E.W41

## 7. LITERATURE

### Obligatory

1. Oxford Handbook of Clinical Medicine, 10<sup>th</sup> edition
2. Macleod's Clinical Examination, 14<sup>th</sup> edition

### Supplementary

1. Harrison’s Principles of Internal Medicine, 19th edition.
2. Bate’s Guide to Physical Examination and History Taking, 12th edition

## 8. VERIFYING THE EFFECT OF LEARNING

Code of the course effect of learning	Ways of verifying the effect of learning	Completion criterion
G.S1, G.S2, G.S3, G.S4	Active participation in all seminars and classes.	Obligatory attendance and active participation in all seminars and classes.

G.S5	Preparing a power-point presentation of case report.	Presentation of case report.
G.K1, G.K2, G.K3	Execution of assigned tasks on the e-learning platform.	Execution of assigned tasks on the e-learning platform.
G.K1, G.K2, G.K3	Oral colloquium at the end of the course with the appointed doctor separately for each subgroup.	3.0 (satisfactory).

## 9. ADDITIONAL INFORMATION

### Lectures:

Cardiovascular disease risk assessment and management (2 hrs).  
Imaging studies in the clinical practice (2 hrs).  
Symptoms and signs of endocrine disorders. (2 hrs)  
Diabetes mellitus – classification, diagnosis and complications. Metabolic syndrome. (2 hrs)  
Laboratory tests interpretation (2 hrs).

(2W4) At the first day of the course we meet at the entrance of the clinic (The Department of Endocrinology, Diabetology and Internal Medicine – Kondratowicza Street 8, building C, 7th floor) at 8:00 a.m. Then we present the detailed schedule of classes. Some seminars and classes may be conducted as e-learning, depending on epidemiological situation.

**Students are expected to come to the class on time.**

**Students are required to bring doctor's apron, stethoscopes, shift shoes, flashlight, and personal protective equipment (depending on the epidemiological situation).**

**Outer clothes must be left in the cloakroom downstairs.**

**Jewelry must be removed from hands/wrists for the time of classes.**

**Long hair must be tied back.**

**To provide good learning environment for everyone, students are requested to turn off any electronic devices that might disturb the class.**

Some seminars and classes may be conducted as e-learning, depending on the epidemiological situation.

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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.



# Medical Psychology

## 1. IMPRINT

<b>Academic Year</b>	2024/2025
<b>Department</b>	Faculty of Medicine
<b>Field of study</b>	Medicine
<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>	Completion
<b>Educational Unit / Educational Units</b>	Studium Psychologii Zdrowia [Department of Health Psychology] ul. Litewska 14/16, 00-575 Warszawa, Tel. +48 22 116 92 11
<b>Head of Educational Unit / Heads of Educational Units</b>	Professor Dorota Włodarczyk, MA, PhD
<b>Course coordinator</b>	Magdalena Łazarewicz, MA, PhD magdalena.lazarewicz@wum.edu.pl
<b>Person responsible for syllabus</b>	Magdalena Łazarewicz, MA, PhD magdalena.lazarewicz@wum.edu.pl
<b>Teachers</b>	Magdalena Łazarewicz, MA, PhD (magdalena.lazarewicz@wum.edu.pl) Marcin John, MA (marcin.john@gmail.com)

## 2. BASIC INFORMATION

<b>Year and semester of studies</b>	III year, 1st semester	<b>Number of ECTS credits</b>	1.00
<b>FORMS OF CLASSES</b>			

Contacting hours with academic teacher	Number of hours	ECTS credits calculation
Lecture (L)		
Seminar (S)	10	0.25
Classes (C)	10	0.25
e-learning (e-L)		
Practical classes (PC)		
Work placement (WP)		
<b>Unassisted student's work</b>		
Preparation for classes and completions	10	0.5

<b>3. COURSE OBJECTIVES</b>	
O1	Student acquires skills and knowledge on the psychological aspects of the medical patient care, is familiar with the concept of health-related quality of life and understands psychosocial consequences of hospitalization and chronic illness.
O2	Student understands and is able to identify psychosocial risk factors of somatic diseases, knows the mechanisms of human functioning in health and illness (including terminal disease).
O3	Student gets familiar with a problem of abuse and basic methods of psychological intervention.
O4	Student understands the elements of the patient's perspective, knows how to diagnose the patient's attitude toward illness and treatment; is familiar with motivational interviewing and health promotion methods.
O5	Student learns how age and age-related developmental needs can affect delivery of care and responses to illness and how to respond to them effectively.
O6	Student knows the signs of work stress and burnout and is familiar with available preventive methods.

<b>4. STANDARDS OF LEARNING – DETAILED DESCRIPTION OF EFFECTS OF LEARNING</b>	
<b>Code and number of the effect of learning in accordance with standards of learning</b>	<b>Effects in the field of:</b> <i>(in accordance with appendix to the Regulation of Minister of Science and Higher education from 26th of July 2019)</i>
<b>Knowledge – Graduate* knows and understands:</b>	

D.W1	social dimension of health and illness, the impact of the social environment (family, social networks) and social inequalities as well as socio-cultural differences on health, as well as the role of social stress in health and self-destructive behaviour
D.W2	social factors influencing behaviour in health and disease, especially in chronic disease
D.W3	forms of abuse, models explaining family and institutional abuse, social bases of different forms of abuse and the doctor's role in recognizing it
D.W4	Social approached to the meaning of health, illness, disability and aging in the relation to social attitudes, social consequences of the somatic disease, disability and socio-cultural barriers, and the concept of health related quality of life
D.W7	psychosocial consequences of hospitalization and chronic disease
D.W9	basic human psychological mechanisms of functioning in health and disease
D.W10	the role of the family in the treatment process
D.W11	aspects of adaptation to the disease as a challenging situation, phases of adaptation to threatening situation, including dying and grief
D.W12	the role of stress in etiopathogenesis and progress of the somatic disease and recognizes coping mechanisms
D.W14	the principles of health promotion, its tasks and main lines of action, with particular emphasis on knowledge of the role of elements of a healthy lifestyle
D.W15	the principles of motivating the patient to health promoting behaviours and informing about unfavorable prognosis

**Skills– Graduate\* is able to:**

D.U1	in the whole therapeutic process, include patient's subjective needs and expectations resulting from socio-cultural background
D.U2	recognize signs of risk and auto destructive behaviours and reacts to them accordingly
D.U3	chooses treatment which minimizes social consequences of the disease for the patient
D.U10	recognizes signs of abuse and its risk factors and reacts accordingly
D.U11	applies basic psychological motivational and supportive interventions

\* In appendix to the Regulation of Minister of Science and Higher education from 26th of July 2019 „graduate”, not student is mentioned.

**5. ADDITIONAL EFFECTS OF LEARNING (non-compulsory)**

Number of effect of learning	Effects in the fields of:
------------------------------	---------------------------

**Knowledge – Graduate knows and understands:**

K1	the concept of professional burnout and understands how it can be prevented
K2	-

**Skills– Graduate is able to:**



S1	
S2	

**Social Competencies – Graduate is ready for:**

SC1	
SC2	

**6. CLASSES**

Form of class	Class contents	Effects of Learning
S	S1 - Seminar 1 – Psychosocial aspects of the medical profession Introduction to Medical Psychology. The concept of professional burnout. Strategies of preventing burnout and coping with stress.	D.K1, K1, D.K12
	S2 - Seminar 2 – Stress and abuse. Theoretical bases of stress and coping. The role of a doctor in recognizing and preventing abuse/domestic violence. Basic psychological interventions in the situation of abuse. Biopsychosocial approach to patients in medical practice.	D.K3, D.K12, D.S10
	S3 – Seminar 3 - The role of psychosocial factors in etiopathogenesis of somatic disease. Promoting health in medical practice. Motivational interview – Applying basics of motivational interviewing in medical practice.	D.K2, D.K10, D.K12, D.K14, D.K15, D.S2, D.S11
C	PC1 – Practical class 1 - The concept of health-related quality of life, psychosocial consequences of disease and adaptation to illness. Attitude towards health and illness.	D.K1, D.K4, D.K7, D.K9, D.K11, D.S1, D.S3
	PC2 – Practical class 2 - Psychological aspects of disability. Health and illness across lifespan	D.K9, D.K11, D.S1
	PC3 – Practical class 3 - Psychological aspects of death, dying, care for terminal patients and grief. Delivering bad news- Practice in delivering bad news, examples of protocols for delivering bad news to patients and their families.	D.K10, D.K11, D.K15, D.S1
S	S4 – Seminar 4 - Test	

**7. LITERATURE**

**Obligatory**

PDF materials provided by the teacher during the course.

**Supplementary**

Van Teijlingen E. & Humphris, G. (2019). Psychology and Sociology Applied to Medicine. Elsevier.  
 Feldman, M & Christensen, J.(2014). Behavioral Medicine. A guide for Clinical Practice. McGraw-Hill Medical  
 Ofri, D.(2014). What doctors Feel: How Emotions Affect the Practice of Medicine. Beacon Press.  
 Gabe, J. & Monaghan, L.(2013). Key Concepts in Medical Sociology (SAGE Key Concepts series). Sage Publications  
 The above textbooks are available for short rental from the Department of Psychology and Medical Communication library (single copies).

## 8. VERIFYING THE EFFECT OF LEARNING

Code of the course effect of learning	Ways of verifying the effect of learning	Completion criterion
D.K1-D.K4, D.K7. D.K9-D.K12, D.K14- D.K15, D.S1-D.S3, D.S10, D.S11, K1	Final test, written (case study analysis with 4 short open questions and 2 theoretical open questions).	Min. 55% of correct answers

## 9. ADDITIONAL INFORMATION

Attendance: Students are required to attend and actively participate in all seminars and classes. In case of an excused absence (max. 1 during the course) students are obliged to make up missed work. In such cases students should notify the teacher as soon as possible to establish the way of covering the absence. Change of subgroups is possible only after consulting the teacher in advance.

Students are expected to come to the class on time. Being late for over 15 minutes counts as an absence. Recurring tardiness will result in additional work – an essay or short review of literature (based on the decision of the teacher, depending on the missed material).

To provide good learning environment for everyone, students are requested to turn off any electronic devices that might disturb the class.

Test: The final test takes place during the last seminar (7<sup>th</sup> week from the beginning of the course) and it consists of a case study (an analysis of a patient on a basis of short open questions) and two theoretical open questions.

Contact information to the course coordinator: Magdalena Łazarewicz, MA, PhD, [magdalena.lazarewicz@wum.edu.pl](mailto:magdalena.lazarewicz@wum.edu.pl)

The Department of Health Psychology runs the Psychological Students Science Club “Psyche” (in English) (contact information: [magdalena.lazarewicz@wum.edu.pl](mailto:magdalena.lazarewicz@wum.edu.pl)).

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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.



# Medical Communication

## 1. IMPRINT

<b>Academic Year</b>	2024/2025
<b>Department</b>	Faculty of Medicine
<b>Field of study</b>	Medicine
<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>	Completion
<b>Educational Unit / Educational Units</b>	Studium Psychologii Zdrowia [Department of Health Psychology] ul. Litewska 14/16, 00-575 Warszawa, Tel. +48 22 116 92 11
<b>Head of Educational Unit / Heads of Educational Units</b>	Professor Dorota Włodarczyk, MA, PhD
<b>Course coordinator</b>	Magdalena Łazarewicz, MA, PhD magdalena.lazarewicz@wum.edu.pl
<b>Person responsible for syllabus</b>	Magdalena Łazarewicz, MA, PhD magdalena.lazarewicz@wum.edu.pl
<b>Teachers</b>	Magdalena Łazarewicz, MA, PhD (magdalena.lazarewicz@wum.edu.pl) Marcin John, MA (marcin.john@gmail.com)

## 2. BASIC INFORMATION

<b>Year and semester of studies</b>	III year, 1st semester	<b>Number of ECTS credits</b>	1.00
<b>FORMS OF CLASSES</b>	<b>Number of hours</b>	<b>ECTS credits calculation</b>	
<b>Contacting hours with academic teacher</b>			

Lecture (L)		
Seminar (S)		
Classes (C)	10	0.5
e-learning (e-L)		
Practical classes (PC)		
Work placement (WP)		
<b>Unassisted student's work</b>		
Preparation for classes and completions	10	0.5

<b>3. COURSE OBJECTIVES</b>	
O1	The aim of the course is to provide students with opportunity to develop skills in building proper doctor-patient relationship through medical communication, as well as to increase awareness of the student's own communication style.
O2	To improve skills in nonverbal communication during conducting a consult (to raise awareness of student's own non-verbal behaviours and sensitivity to nonverbal cues from a patient).
O3	To improve skills in verbal communication during a consult - active listening: discovering patient's perspective, collecting and passing information (including bad news) and including the patient into treatment process and making decisions regarding treatment.
O4	To provide practice in applying basic motivational and supportive interventions.
O5	To provide practice in group work: delivering and receiving constructive feedback information.
O6	To increase empathy by experiencing the role of a patient in a safe learning environment.

<b>4. STANDARDS OF LEARNING – DETAILED DESCRIPTION OF EFFECTS OF LEARNING</b>	
<b>Code and number of the effect of learning in accordance with standards of learning</b>	<b>Effects in the field of:</b> <i>(in accordance with appendix to the Regulation of Minister of Science and Higher education from 26th of July 2019)</i>
<b>Knowledge – Graduate* knows and understands:</b>	
D.W5	the rules and methods of communication with the patient and his family, which are used to build an empathic, trust-based relationship
D.W6	the role of good verbal and nonverbal communication in doctor-patient interaction, the meaning of trust in the interaction with patients
<b>Skills– Graduate* is able to:</b>	
D.U1	In the whole therapeutic process, include patient's subjective needs and expectations resulting from socio-cultural background

D.U2	recognize signs of risk and auto destructive behaviors and reacts to them accordingly
D.U3	choose treatment which minimizes social consequences of the disease for the patient
D.U4	build the atmosphere of trust during the treatment process
D.U5	conduct the consult with the patient with the use of active listening skills and empathy, and talks to the patient about his life situation
D.U6	inform the patient about the goal, progress and possible risks of suggested diagnostic and treatment methods
D.U7	Involve the patient in the therapeutic process
D.U8	pass bad news to the patient and his/her family
D.U9	passes recommendations and information on health promoting lifestyle
D.U11	apply basic psychological motivational and supportive interventions

\* In appendix to the Regulation of Minister of Science and Higher education from 26th of July 2019 „graduate”, not student is mentioned.

<b>5. ADDITIONAL EFFECTS OF LEARNING (non-compulsory)</b>	
<b>Number of effect of learning</b>	<b>Effects in the fields of:</b>
<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>		
<b>Form of class</b>	<b>Class contents</b>	<b>Effects of Learning</b>
C	Practical class 1: Medical Communication – review and summary: skills (verbal and nonverbal communication bases for active listening) and protocols (Calgary-Cambridge Protocol, SPIKES); preparation for role-playing exercises.	D.W5, D.W6
C	Practical classes 2-4: Practical exercises of the use of psychological knowledge and communication skills for solving problems in medical practice (based on role-playing exercises), e.g. collecting a basic medical interview in a primary care setting and in an ER, passing bad news to the patient and the family, explaining medical procedures, motivating the patient for better adherence or a lifestyle change..	D.U1-D.U9, D.U11

<b>7. LITERATURE</b>
<b>Obligatory</b>
Lloyd, M., Bor R., Noble, L. (2019) Clinical Communication Skills for Medicine. Elsevier.

Required communication protocols as PDF materials provided by the teacher during the course.

**Supplementary**

Cole, S., Bird, J. & Weiner, J.S. (2014). Medical Interview. Elsevier.  
Silverman, J., Kurtz, S, Draper J (2008) Skills for Communicating with Patients. Radcliffe Publishing.

**8. VERIFYING THE EFFECT OF LEARNING**

Code of the course effect of learning	Ways of verifying the effect of learning	Completion criterion
D.U1-D.U9, D.U11	Participation in the video-recorded role-playing exercise as a doctor and as a patient.	Minimal acceptable level of performance on the learning outcome
D.W5, D.W6	Preparation of the essay self-evaluating communication skills performed in the role-playing exercise.	Minimal acceptable level of performance on the learning outcome, providing answers to all points included in the instruction.

**9. ADDITIONAL INFORMATION**

The class is intended as practical and is based on experiential learning. The outcomes of that process are strongly related to active participation in all in-class activities, therefore attendance is mandatory. Students will be required to make up missed work in case of an excused absence. In such cases students should notify the teacher as soon as possible to establish the way of covering the absence. Change of subgroups is possible only after consulting the teacher in advance and not for the classes for which the particular student's role-playing exercise was scheduled. Students are expected to come to the class on time and participate actively (in the role-playing exercises as doctors/patients and during discussions). Being late for over 15 minutes counts as an absence. Recurring tardiness will result in additional work – an essay or short review of literature (based on the decision of the teacher, depending on the missed material).

To provide good learning environment for everyone, students are requested to turn off any electronic devices that might disturb the class.

**Role-playing**

The classes are based on role-playing exercises and each student is required to participate in two role-playing scenes: once as a doctor and once as a patient. Scenarios are delivered to students prior to the class. The role-playing are video recorded (on the student or teacher's equipment). The video is only made available to the participants of a given role-playing exercise.

**Essay**

To complete the course students are required to write an essay, which presents reflections regarding communication process during the role-play. The paper should be delivered to the teacher within a week from the class on which the particular role-playing exercise took place. Detailed guidelines for this task are provided and discussed during the course.

The Department of Health Psychology runs the Psychological Students Science Club "Psyche" (in English) (contact information: [magdalena.lazarewicz@wum.edu.pl](mailto:magdalena.lazarewicz@wum.edu.pl)).

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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.



## Pharmacology and Toxicology

### 1. IMPRINT

<b>Academic Year</b>	2024/2025
<b>Department</b>	Faculty of Medicine
<b>Field of study</b>	Medicine
<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>	Credit
<b>Educational Unit / Educational Units</b>	Chair and Department of Experimental and Clinical Pharmacology Centre for Preclinical Research and Technology CePT, Banacha 1b, 02-927 Warsaw, tel. (+48) 22 116 61 60
<b>Head of Educational Unit / Heads of Educational Units</b>	Prof. Dagmara Mirowska-Guzel MD, PhD, SciD tel. (+48) 22 1166160
<b>Course coordinator</b>	Maciej Niewada MD, PhD, SciD tel. (+48) 691745377
<b>Person responsible for syllabus</b>	Maciej Niewada MD, PhD, SciD tel. (+48) 691745377
<b>Teachers</b>	Jan Bembenek MD, PhD, SciD Iwona Korzeniewska-Rybicka MD, PhD Marcin Granat, MSc Pharm Wojciech Masełbas MD, PhD Maciej Niewada MD, PhD, SciD Ceren Postula, MSc, PhD, SciD Justyna Pyrzanowska MD, PhD, SciD Ewa Widy-Tyszkiewicz MD, PhD, SciD Aleksandra Wisłowska-Stanek MD, PhD, SciD

<b>2. BASIC INFORMATION</b>			
<b>Year and semester of studies</b>	III year 5 & 6 semester	<b>Number of ECTS credits</b>	9.00
<b>FORMS OF CLASSES</b>	<b>Number of hours</b>	<b>ECTS credits calculation</b>	
<b>Contacting hours with academic teacher</b>			
Lecture (L)	30 (30h e-learning)	2	
Seminar (S)	10	½	
Discussions (D)	60	2	
e-learning (e-L)			
Practical classes (PC)			
Work placement (WP)			
<b>Unassisted student's work</b>			
Preparation for classes and completions	60	2	

<b>3. COURSE OBJECTIVES</b>	
O1	Concepts and principles of mechanism of action, clinical applications and adverse effects of drugs.
O2	Translation of pharmacological principles into clinical decision-making.
O3	

<b>4. STANDARDS OF LEARNING – DETAILED DESCRIPTION OF EFFECTS OF LEARNING</b>	
<b>Code and number of the effect of learning in accordance with standards of learning</b>	<b>Effects in the field of:</b> <i>(in accordance with appendix to the Regulation of Minister of Science and Higher education from 26th of July 2019)</i>
<b>Knowledge – Graduate* knows and understands:</b>	
G.K1	C.W11. genetic mechanisms of acquiring drug resistance by microorganisms and neoplastic cells; C.W15. the consequences of exposure of the human body to various chemical and biological factors and the principles of prevention;



	<p>C.W20. basics of disinfection, sterilization and aseptic procedures;</p> <p>C.W35. individual groups of therapeutic agents;</p> <p>C.W36. main mechanisms of drug action and their changes in the system depending on age;</p> <p>C.W37. the impact of disease processes on drug metabolism and elimination;</p> <p>C.W38. basic principles of pharmacotherapy;</p> <p>C.W39. major drug side effects, including drug interactions;</p> <p>C.W40. the problem of drug resistance, including multi-drug resistance;</p> <p>C.W41. indications for genetic tests carried out in order to individualize pharmacotherapy;</p> <p>C.W42. basic directions of therapy development, in particular the possibilities of cell, gene and targeted therapy in specific diseases;</p> <p>C.W43. basic concepts of general toxicology;</p> <p>C.W44. a group of drugs, the abuse of which can lead to poisoning;</p> <p>C.W45. symptoms of the most common acute poisonings, including alcohol, drugs and other psychoactive substances, heavy metals and selected groups of drugs;</p> <p>C.W46. basic principles of diagnostic procedures in poisoning;</p> <p>C.W48. the consequences of a deficiency of vitamins or minerals and their excess in the body;</p>
G.K2	

**Skills– Graduate\* is able to:**

G.S1	<p>C.U10. interpret the results of microbiological tests;</p> <p>C.U13. perform simple pharmacokinetic calculations;</p> <p>C.U14. select drugs in appropriate doses in order to correct pathological phenomena in the body and in individual organs;</p> <p>C.U15. design schemes of rational chemotherapy of infections, empirical and targeted;</p> <p>C.U16. prepare records of all prescription forms of medicinal substances;</p> <p>C.U17. use pharmaceutical guides and databases on medicinal products;</p> <p>C.U18. estimate the toxicological risk in specific age groups and in the states of liver and kidney failure and prevent drug poisoning;</p> <p>C.U19. interpret the results of toxicological tests</p>
G.S2	

\* In appendix to the Regulation of Minister of Science and Higher education from 26th of July 2019 „graduate”, not student is mentioned.

**5. ADDITIONAL EFFECTS OF LEARNING (non-compulsory)**

Number of effect of learning	Effects in the fields of:
<b>Knowledge – Graduate knows and understands:</b>	
K1	
K2	
<b>Skills– Graduate is able to:</b>	
S1	
S2	
<b>Social Competencies – Graduate is ready for:</b>	

SC1	
SC2	

<b>6. CLASSES</b>		
<b>Form of class</b>	<b>Class contents</b>	<b>Effects of Learning</b>
Seminars and classes:	<ol style="list-style-type: none"> <li>1. Pharmacokinetics I.</li> <li>2. Pharmacokinetics II.</li> <li>3. Chemotherapeutic agents I.</li> <li>4. Chemotherapeutic agents. II.</li> <li>5. Chemotherapeutic agents III.</li> <li>6. Anthelmintic drugs. Antiprotozoal drugs. Antifungal drugs.</li> <li>7. Drugs used in gastrointestinal diseases. Control of gastric acidity and treatment of peptic ulcers. Emetic drugs and antiemetic drugs. Drugs which increase gastro-intestinal motility. Antidiarrheal drugs.</li> <li>8. Agents used in disorders of coagulation.</li> <li>9. Adrenocorticosteroids and adrenocortical antagonists. The hypothalamic and pituitary hormones. Sex hormones – estrogens, progestins, androgens.</li> <li>10. Pancreatic hormones and antidiabetic drugs. Thyroid and antithyroid drugs.</li> <li>11. Prescription writing.</li> <li>12. Drugs used in respiratory diseases.</li> <li>13. CV drugs 1. Catecholamines and sympathomimetic drugs. Adrenergic receptor antagonists.</li> <li>14. CV drugs 2. Calcium channel blockers. Diuretic agents.</li> <li>15. CV drugs 3. Drugs affecting RAAS. Other vascular drugs.</li> <li>16. Lipid lowering agents. Drugs in treatment of obesity.</li> <li>17. Opioid analgesics and antagonists.</li> <li>18. Nonsteroidal anti-inflammatory drugs and non-opioids analgesics.</li> <li>19. Psychostimulants. Anxiolytics.</li> <li>20. Antipsychotic agents.</li> <li>21. Antidepressant agents.</li> <li>22. Drugs used in neurological disorders.</li> </ol>	CW11-CW48 CU10-CU19
Lectures	<ol style="list-style-type: none"> <li>1. Introduction to pharmacology. Basic principles. Reliable sources of information in pharmacology.</li> <li>2. Pharmacodynamics: drug action, the relationship between drug concentration and effect.</li> <li>3. Antiviral drugs.</li> <li>4. Drug prevention of infectious diseases.</li> <li>5. Drugs used in chemotherapy of tuberculosis and leprosy.</li> <li>6. Rational use of chemotherapeutics.</li> <li>7. Agents that affect bone mineral homeostasis. Drugs used in rheumatology.</li> <li>8. Agents used in cytopenias. Hematopoietic growth factors.</li> <li>9. Agents acting at the neuromuscular junction and autonomic ganglia. Cholinergic agonists. Cholinergic receptor-blocking drugs.</li> <li>10. Mediators of inflammation and allergy. Anti-allergic drugs. Immunopharmacology.</li> <li>11. Cancer drugs.</li> <li>12. Local and general anaesthetics.</li> </ol>	CW11-CW48 CU10-CU19

	13. Antihypertensive agents. 14. Drugs used in angina pectoris. 15. Agents used in cardiac arrhythmias. 16. Drugs used in ophthalmology. 17. Dermatologic pharmacology. 18. Pharmacology of alcohol consumption. 19. Drugs of abuse. 20. Principles of toxicology. Harmful effects of drugs. 21. Occupational and environmental toxicology. 22. Agents used in anaemias. Pharmacology of vitamins.	
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<b>7. LITERATURE</b>		
<b>Obligatory</b>		
1. Humphrey P. Rang, James M. Ritter, Rod J. Flower, Graeme Henderson. Rang & Dale's Pharmacology, 9th Edition. 2018. 2. Bertram G. Katzung. Basic and Clinical Pharmacology 15th Edition. 2021. 3. Katzung & Trevor's Pharmacology Examination and Board Review, Mcgraw Hill Education & Medic, 13th Edition, 2021. 4. Goodman and Gilman's The Pharmacological Basis of Therapeutics. Laurence Brunton, Bjorn Knollman, Randa Hilal-Dandan, McGraw-Hill Education, 14th Edition. 2022.		
<b>Supplementary</b>		
1. Paweł Krząścik, Przemysław Mikołajczak. Pharmacology in a nutshell. 2017. 1st Edition. ISBN: 978-83-941043-2-0 2. Lippincott Illustrated Reviews: Pharmacology, 7th edition, Karen Whalen PharmD, BCPS, Publication Date October 2, 2018 3. BRS Pharmacology, Author(s): Sarah Lerchenfeldt , Gary Rosenfeld Ph.D., 7th edition, publication date: August 12, 2019		

<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>
CW11-CW48 CU10-CU19	Attendance Multiple choice tests or oral credits	>50%  <i>Grade and criteria:</i> 2,0 (unsatisfactory) <=50% 3,0 (satisfactory) 51-58% 3,5 (better than satisfactory) 59-68% 4,0 (good) 69-78% 4,5 (better than good) 79-88% 5,0 (very good) >=89%

<b>9. ADDITIONAL INFORMATION</b>
<i>Students are communicated and updated via TEAMS platform.</i>

*Seminars, classes and lectures are held at Rectorate building of MUW, Main Library, Didactic Center – Banacha Campus, Żwirki i Wigury 61. Students are obliged to attend all practical classes and seminars with the group assigned only (individual arrangements are to be approved in written (mail) in advance).*

*After both V and VI semesters students are obliged to complete the final credits in form of MCQ or oral colloquium that covers the scope of classes, seminars and lectures. After the retake there is one more try to pass in form of commission. Total number of tries is 3.*

*Credits of the both tests on V and VI semesters entitle the student to join Clinical Pharmacology subject at the VII semester. Final exam at the end of VII semester covers both pharmacology/toxicology and clinical pharmacology.*

#### Rules on colloquiums and Q&A tests

1. Students are informed about the date/time and the venue for MCQ tests either for semester colloquium or final exam at least one month in advance.
2. Students are expected to arrive at the venue at least 15 minutes before test start. Those who are late more than 15 minutes after the test start are not allowed to enter and are kindly invited for the retake.
3. To facilitate students identification ID document (preferably student record book) need to be presented, otherwise students are not allowed to take the test.
4. Students are asked to wait outside the room and can enter only following identification confirmed.
5. Students are allocated the individual place which is pointed by supervisor.
6. **The test is based on student individual work - unauthorized materials (including revision notes and electronic devices including mobile phones) are disallowed. Communication with any person during the exam, other than the supervisor, is prohibited and can be the cause for student banning.**
7. For MCQ tests only one answer is correct.
8. To pass the test students need to provide 50% + 1 (i.e. 51 for 100 questions) correct answers. The final individual score is based on the number of correct answers provided and other students' performance (the distribution of test results).

The form of retake is usually the same as first approach unless number of students for retake determines the feasible form which then is individually decided.

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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.



## Introduction to Pediatrics

### 1. IMPRINT

<b>Academic Year</b>	2024/2025
<b>Department</b>	Faculty of Medicine
<b>Field of study</b>	Medicine
<b>Main scientific discipline</b>	Medical science
<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>	<b>credit</b>
<b>Educational Unit / Educational Units</b>	Department of Pediatrics with Clinical Assessment Unit. (2W9) 63a Żwirki i Wigury St., 02-091 Warsaw (Pediatric Hospital) Phone: 48 22 317 92 31 e-mail: <a href="mailto:obserwacyjny.dsk@uckwum.pl">obserwacyjny.dsk@uckwum.pl</a>
<b>Head of Educational Unit / Heads of Educational Units</b>	1. Assoc. Prof. Ernest Kuchar, MD, PhD

<b>Course coordinator</b>	1. Assoc. Prof. Ernest Kuchar, MD, PhD
<b>Person responsible for syllabus</b>	1. Anna Piwowarczyk, MD, <a href="mailto:anna.piwowarczyk@wum.edu.pl">anna.piwowarczyk@wum.edu.pl</a> 2. Monika Wanke-Rytt, MD, PhD, <a href="mailto:monika.wanke@uckwum.pl">monika.wanke@uckwum.pl</a>
<b>Teachers</b>	<b>Department of Pediatrics with Clinical Assessment Unit (2W9)</b> Ernest Kuchar, MD, PhD Anna Piwowarczyk, MD, PhD Magdalena Okarska-Napierała, MD, PhD Monika Wanke-Rytt, MD, PhD Dominika Rykowska, MD Joanna Mańdziuk, MD Weronika Woźniak, MD

## 2. BASIC INFORMATION

<b>Year and semester of studies</b>	3 <sup>rd</sup> year, 5 <sup>th</sup> and 6 <sup>th</sup> semester	<b>Number of ECTS credits</b>	4
<b>FORMS OF CLASSES</b>		<b>Number of hours</b>	<b>ECTS credits calculation</b>
<b>Contacting hours with academic teacher</b>			
Lecture (L)			
Seminar (S)		20	1,3
Classes (C)		40	2,7
e-learning (e-L)			
Practical classes (PC)			
Work placement (WP)			
<b>Unassisted student's work</b>			
Preparation for classes and completions			

## 3. COURSE OBJECTIVES

O1	Acquiring knowledge of child development, nutrition, and physiology from birth to puberty.
O2	Acquiring skills to examine a child's development both subjectively and physically across different stages.

03	Caring for the child while fulfilling the doctor's role and enhancing skills to provide personalized care for both healthy and sick children.
04	Describe health maintenance and preventive care for children: <ul style="list-style-type: none"> <li>• nutrition,</li> <li>• vaccination,</li> <li>• screening tests</li> <li>• hydration</li> <li>• risk factor identification and modification.</li> </ul>
05	Learn effective team and interpersonal communication skills, including empathetic communication with parents or guardians of children.
06	Apply principles of physiology and pharmacology to children from birth through adulthood, especially age-related changes.
07	Acquiring knowledge of a physician's responsibilities, duties, and powers in pediatric and primary care units.

**4. STANDARDS OF LEARNING – DETAILED DESCRIPTION OF EFFECTS OF LEARNING** (*concerns fields of study regulated by the Regulation of Minister of Science and Higher Education from 26 of July 2019; does not apply to other fields of study*)

<b>Code and number of effect of learning in accordance with standards of learning</b>	<b>Effects in the field of:</b> ( <i>in accordance with appendix to the Regulation of Minister of Science and Higher education from 26th of July 2019</i> ) G.K.1-3, 6 G.S.2,4,7,9,10-14, 27,29,38
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**Knowledge – Graduate\* knows and understands:**

E.W1	environmental and epidemiological conditions of the most common diseases
E.W2	principles of feeding healthy and sick children, including natural feeding, vaccination
E.W3	causes, symptoms, principles of diagnosis and therapeutic management for the most common diseases in children: <ol style="list-style-type: none"> <li>1) rickets, tetany, fits,</li> <li>2) heart defects, myocarditis, endocarditis and pericarditis, cardiomyopathy, abnormal heart rhythm, cardiac failure, hypertension, syncope,</li> <li>3) acute and chronic diseases of the upper and lower respiratory tract, congenital defects of the respiratory tract, tuberculosis, cystic fibrosis, asthma, allergic rhinitis, urticaria, anaphylactic shock, angioedema,</li> <li>4) anaemia, bleeding diatheses, marrow failure, cancers in children, including solid tumours typical of childhood,</li> <li>5) acute and chronic abdomen pain, vomiting, diarrhoea, constipations, alimentary canal bleedings, peptic ulcer disease, non-specific intestine diseases, pancreas diseases, cholestasis and liver diseases and other acquired diseases and congenial defects of the alimentary canal,</li> </ol>

	6) urinary system infections, congenial defects of the urinary system, nephrotic syndrome, nephrolithiasis, acute and chronic renal failure, acute and chronic renal inflammations, systemic renal diseases, urination disorders, vesicoureteral reflux, 7) growth disturbances, thyroid and parathyroid diseases, adrenal gland diseases, diabetes, obesity, growing pains and disorders of sexual gland functions, 8) cerebral palsy, encephalitis and meningitis, epilepsy, 9) the most frequent infectious diseases in childhood, 10) genetic syndromes, 11) connective tissue diseases, rheumatic fever, juvenile arthritis, systemic lupus, dermatomyositis
E.W6	most common life-threatening conditions in children and rules of conduct in these states;

**Skills– Graduate\* is able to:**

E.U2	conduct a medical interview with the child and his or her family
E.U4	perform a physical examination of the child at any age
E.U7	assess the patient's general condition, state of consciousness and awareness
E.U9	compare anthropometric and blood pressure measurements with the data on the growth charts
E.U10	assess the stage of puberty
E.U11	Perform and understand developmental screenings
E.U12	perform a differential diagnosis of the most common diseases of adults and children
E.U13	assess and describe the patient's somatic and mental state
E.U14	recognize states of immediate danger to life
E.U27	Qualify the patient for vaccination;
E.U29	perform basic procedures and medical procedures: <ol style="list-style-type: none"> <li>1) body temperature measurement, pulse count and non-invasive blood pressure check,</li> <li>2) vital signs monitoring with the aid of a pulse oximeter and cardiac monitor,</li> <li>3) spirometry, oxygen therapy, manual ventilation and basics of mechanical ventilation,</li> <li>4) oro- and nasopharyngeal airway device placement,</li> <li>5) intravenous, intramuscular, subcutaneous injections, intravenous cannulation, venous blood sampling, blood culture taking, arterial and capillary blood sampling,</li> <li>6) nasal, pharyngeal and skin swab taking,</li> <li>7) male and female urinary bladder catheterisation, nasogastric tube placement, stomach lavage, enema,</li> <li>8) standard resting electrocardiogram with adequate interpretation, electrical cardioversion and defibrillation,</li> <li>9) simple strip test and blood glucose check</li> </ol>
E.U38	keep patient's medical records

\* In appendix to the Regulation of Minister of Science and Higher education from 26th of July 2019 „graduate”, not student is mentioned.



<b>5. ADDITIONAL EFFECTS OF LEARNING (non-compulsory)</b>	
<b>Number of effect of learning</b>	<b>Effects in the fields of:</b>
<b>Knowledge – Graduate knows and understands:</b>	
K1	Legal regulations and basic methods for medical experimentation and conducting other medical research, including basic methods of data analysis
K2	the concept of medical error, the most common causes of medical errors and the principles of opinion in such cases
<b>Skills– Graduate is able to:</b>	
S1	collect information on the presence of risk factors for chronic diseases and plan preventive measures at different levels of prevention
S2	Act in a way to avoid medical errors
<b>Social Competencies – Graduate is ready for:</b>	
SC1	<ol style="list-style-type: none"> <li>1) to establish and maintain deep and respectful contact with the patient, and to show understanding of world and cultural differences;</li> <li>2) be guided by the patient's well-being;</li> <li>3) respect the medical confidentiality and rights of the patient;</li> <li>4) take action towards the patient on the basis of ethical principles, with awareness of the social conditions and limitations resulting from the disease, perceiving and recognizing their own limitations and making a self-assessment of deficits and educational needs;</li> <li>6) promote pro-healthy behaviour;</li> <li>7) use objective sources of information;</li> <li>8) formulate conclusions from own measurements or observations;</li> <li>9) implement the principles of professional camaraderie and cooperation in a team of specialists, including representatives of other medical professions, also in a multicultural and multinational environment;</li> <li>10) formulating opinions concerning various aspects of professional activity;</li> <li>11) assume responsibility for decisions taken in the course of professional activity, including in terms of own and other persons' safety.</li> </ol>

<b>6. CLASSES</b>		
<b>Form of class</b>	<b>Class contents</b>	<b>Effects of Learning</b>
Seminar	<ol style="list-style-type: none"> <li>1) physical and subjective paediatric investigation</li> <li>2. psychomotor development</li> <li>3 Feeding part 1</li> <li>4 Nutrition part 2</li> <li>5. evaluation of nutritional status</li> <li>6. general state (state of consciousness, arrangement, body structure)</li> <li>7 Skin, lymph nodes, head and neck examination</li> <li>8 Basic symptoms and their differentiation in respiratory diseases (upper airways)</li> <li>9 Basic symptoms and their differentiation in respiratory diseases (lower airways)</li> <li>10 Basic symptoms and their differentiation in gastrointestinal diseases</li> <li>11 Basic symptoms and their differentiation in urinary tract diseases</li> <li>12 Basic symptoms and their differentiation in cardiovascular diseases</li> </ol>	

	<p>13 Basic symptoms and their differentiation in nervous system diseases (including febrile convulsions)</p> <p>14. protective vaccinations</p> <p>15 Acute infectious diarrhea</p> <p>16 Fever</p> <p>17. meningitis</p> <p>18 Upper respiratory tract infections</p> <p>19 Characteristics of individual development periods and assessment methods</p> <p>20 Colloquium</p> <p>Materials: <a href="https://pediatria.wum.edu.pl/">https://pediatria.wum.edu.pl/</a></p>	
Classes	<p>Week 1.</p> <p>Monday - Physical examination - collecting interview with parent of young child, interview with older child.</p> <p>Tuesday - Physical examination - general condition, assessment of vital functions. Nutrition of children in the 1st year of life</p> <p>Wednesday - Physical examination - head, neck, skin. Child development. Milestones.</p> <p>Thursday - Physical examination - chest, respiratory system.</p> <p>Friday - Physical examination - abdominal cavity (digestive system, urinary system, features of sexual maturation).</p> <p>Week 2</p> <p>Monday - Physical examination - chest, cardiovascular system</p> <p>Tuesday - Basics of neurological examination. Skeletal and articular system.</p> <p>Wednesday - Child with fever (septicemia, upper respiratory tract infection).</p> <p>Thursday - Child with fever (meningitis, gastroenteritis).</p> <p>Friday - Colloquium</p> <p>Additional topics:</p> <ul style="list-style-type: none"> <li>• child development</li> <li>• WHO centile grids</li> <li>• child nutrition in practice</li> <li>• oral and intravenous hydration in practice</li> <li>• vaccinations in practice</li> <li>• skin lesions (rashes)</li> </ul>	

## 7. LITERATURE

### Obligatory

#### Obligatory literature:

1. Tom Lissauer, Will Carroll. Illustrated Textbook of Paediatrics, Elsevier. Fifth edition. (with. T. Lissauer, W.Carroll. Self-assessment in Paediatrics).
2. Karen J. Marcadante, Robert M. Kliegman: Nelson Essentials of Pediatrics. Elsevier, Eighth edition
3. Denis Gill, Niall O'Brien. Paediatric Clinical Examination- made easy. Elsevier, Sixth edition.
4. L.S. Bickley MD, Bates' Pocket Guide to Physical Examination & History Taking, Lippincott Williams & Wilkins,

### Supplementary

**8. VERIFYING THE EFFECT OF LEARNING**

Code of the course effect of learning	Ways of verifying the effect of learning	Completion criterion
G.K.1-3, 6 G.S2,4,7,9,10-14, 27,29,38	<p><i>Credit for the exercises is given by the assistant on the basis of the student's participation in the exercises.</i></p> <p><i>Attendance of the student in all classes is mandatory; max. 1 day of excused absence (the form of homework must be agreed with the course coordinator). /three lateness (more than 15 minutes) to class are equivalent to one absence</i></p> <p><i>In the case of unexcused absences or more excused absences, the student must complete the entire block at a different date (to be agreed with the course coordinator).</i></p> <p><i>The coursework includes the completion of the exercises and the colloquium on the subject discussed during the class</i></p>	<p><i>Completion by assistant</i></p> <p><i>Written test (15 questions, minimum nine questions required)*</i></p> <p><i>*In the case of a negative assessment, the date of the correctional colloquium is agreed upon with the course coordinator within a maximum of 2 weeks from the end of the class.</i></p>

**9. ADDITIONAL INFORMATION** (information essential for the course instructor that are not included in the other part of the course syllabus e.g. if the course is related to scientific research, detailed description of, information about the Science Club)

**During classes, students are required to have: a doctor's apron/scrubs, stethoscope, flashlight, badge, shift shoes and personal protective equipment. Please follow the rule of "nothing below the elbow" (no jewelry, watches or painted nails).**

**The student has the opportunity to evaluate the classes by filling in the university's evaluation questionnaire for classes and academic teachers. Additionally, students can submit their comments directly to the Clinic Secretariat. All suggestions for conducting classes will be considered with utmost care.**

**Students who are late to class for more than 15 minutes will not be allowed into the Department in the absence of a reasonable excuse**

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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.



## Nuclear Medicine

<b>1. IMPRINT</b>	
<b>Academic Year</b>	2024/2025
<b>Department</b>	Faculty of Medicine
<b>Field of study</b>	Medicine
<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>	Credit
<b>Educational Unit / Educational Units</b>	Department of Nuclear Medicine, Warsaw Medical University, Public Central Teaching Hospital Banacha Str. 1a , 02-097 Warsaw, e-mail: <a href="mailto:sekretariat_zmn@wum.edu.pl">sekretariat_zmn@wum.edu.pl</a> , tel. 22 599-22-70, fax: 22 599-11-70

<b>Head of Educational Unit / Heads of Educational Units</b>	Jolanta Kunikowska MD, PhD Prof.
<b>Course coordinator</b>	Assoc. Prof. Małgorzata Kobylecka MD, PhD e-mail: <a href="mailto:malgorzata.kobylecka@wum.edu.pl">malgorzata.kobylecka@wum.edu.pl</a>
<b>Person responsible for syllabus</b>	Assoc. Prof. Małgorzata Kobylecka MD, PhD e-mail: <a href="mailto:malgorzata.kobylecka@wum.edu.pl">malgorzata.kobylecka@wum.edu.pl</a>
<b>Teachers</b>	Jolanta Kunikowska MD, PhD Leszek Królicki MD, PhD Małgorzata Kobylecka MD, PhD Michał Kocemba MD Kacper Pełka MD Konrad Giełdowski MD Alan Iskandar MD Izabela Trojanowska Msc Monika Tulik Phd Szymon Kujda Msc

<b>2. BASIC INFORMATION</b>			
<b>Year and semester of studies</b>	2024/2025 III year, winter and summer semester	<b>Number of ECTS credits</b>	2.00
<b>FORMS OF CLASSES</b>		<b>Number of hours</b>	<b>ECTS credits calculation</b>
<b>Contacting hours with academic teacher</b>			
Lecture (L)			
Seminar (S)		7	0,46
Classes (C)		23	1,54
e-learning (e-L)			
Practical classes (PC)			
Work placement (WP)			
<b>Unassisted student's work</b>			
Preparation for classes and completions			

<b>3. COURSE OBJECTIVES</b>	
O	<p>The aim of the education is to acquire the basics of diagnosis and treatment due to radiopharmaceuticals by the students:</p> <ul style="list-style-type: none"> <li>• physical fundamentals of radiation in nuclear medicine, principles of radiopharmaceutical, principles of instrumentation, principles of hybrid techniques</li> <li>• basic concepts in the field of radiobiology</li> <li>• clinical indications and basic principles of diagnostic (scintigraphy, SPECT/CT and PET/CT) procedures of : cardiovascular system, endocrine glands, gastrointestinal tract, genitourinary tract, bone, central nervous system, respiratory system</li> <li>• principles of treatment procedures (indications, contraindications, principles of qualification for treatment, management of the patient after isotopic therapy) of: benign and malignant thyroid diseases, joint diseases, bone palliation therapy, [<sup>131</sup>I]mIBG, radiolabelled somatostatin analogues for neuroendocrine tumours, treatment in prostate cancer</li> </ul>

<b>4. STANDARDS OF LEARNING – DETAILED DESCRIPTION OF EFFECTS OF LEARNING (concerns fields of study regulated by the Regulation of Minister of Science and Higher Education from 26 of July 2019; does not apply to other fields of study)</b>	
<b>Code and number of the effect of learning in accordance with standards of learning</b>	<b>Effects in the field of:</b> <i>(in accordance with appendix to the Regulation of Minister of Science and Higher education from 26th of July 2019)</i>
<b>Knowledge – Graduate* knows and understands:</b>	
G.K1	<p>Graduate has:</p> <ol style="list-style-type: none"> <li>1. Knowledge of physical basics of nuclear medicine</li> <li>2. Knowledge of basics radiochemistry</li> <li>3. Knowledge about clinical indications and basic principles of diagnostic procedures</li> <li>4. Knowledge about radionuclide treatment procedures</li> </ol>
<b>Skills– Graduate* is able to:</b>	
G.S1	<p>The graduate is able to:</p> <ol style="list-style-type: none"> <li>1. select an appropriate nuclear medicine examination necessary during diagnosis</li> <li>2. select an appropriate therapeutic procedure</li> <li>3. extend the knowledge and improve their skills in nuclear medicine procedures, correctly interpret the results of radionuclide examinations</li> </ol>

\* In appendix to the Regulation of Minister of Science and Higher education from 26th of July 2019 „graduate”, not student is mentioned.

<b>5. ADDITIONAL EFFECTS OF LEARNING (non-compulsory)</b>	
<b>Number of effect of learning</b>	<b>Effects in the fields of:</b>
<b>Knowledge – Graduate knows and understands:</b>	
K1	
K2	
<b>Skills– Graduate is able to:</b>	

S1	
S2	
<b>Social Competencies – Graduate is ready for:</b>	
SC1	
SC2	

<b>6. CLASSES</b>		
<b>Form of class</b>	<b>Class contents</b>	<b>Effects of Learning</b>
Seminar	<p><u>1. Basic physics of Nuclear Medicine devices</u></p> <ul style="list-style-type: none"> <li>Physical basis of radiation in nuclear medicine, principles of instrumentation, principles of hybrid techniques.</li> <li>Knowledge of the basics of measurement data processing and presentation of test results.</li> <li>Theoretical and practical principles of radiological protection procedures.</li> <li>Fundamentals of radiobiology</li> </ul> <p><u>2. Radiochemistry</u></p> <ul style="list-style-type: none"> <li>Definition of radiopharmaceutical - its physical, chemical properties,</li> <li>Construction of the generator, its types.</li> <li>Biological effects of ionising radiation.</li> <li>Basic knowledge of radiobiology.</li> </ul> <p><u>3. Selected clinical applications of nuclear medicine diagnostic procedures</u></p> <ul style="list-style-type: none"> <li>examinations of the cardiovascular system,</li> <li>examinations of the endocrine glands,</li> <li>examinations of the gastrointestinal tract,</li> <li>examinations of the genitourinary tract,</li> <li>examinations of the bone and joint system,</li> <li>examinations of the nervous system,</li> <li>examinations of the respiratory system,</li> <li>examinations applied in the diagnosis of cancer</li> </ul> <p><u>5. Therapy in Nuclear Medicine</u></p> <p>principles of treatment procedures (indications, contraindications, principles of qualification for treatment, management of the patient after radionuclide therapy):</p> <ul style="list-style-type: none"> <li>the treatment of benign and malignant thyroid diseases,</li> <li>treatment with [<sup>131</sup>I]mIBG,</li> <li>the treatment of joint diseases,</li> <li>the treatment of pain symptoms in cancerous metastatic lesions to the skeletal system,</li> <li>the treatment with radiolabelled somatostatin analogues for neuroendocrine tumours.</li> <li>The treatment for prostate cancer</li> <li>novel form of therapy</li> </ul>	F.W1, F. W10. F. W13, F.U7
Classes	Students become familiar with the organization of the facility.	

	They learn about the patient's journey from the administration of the radioisotope to the examination, as well as how the examination is processed. Virtual visit the scintigraphy labs and radiochemistry laboratory	
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<b>7. LITERATURE</b>		
<b>Obligatory</b>		
1. Peter J. Ell Sam Gambhir Nuclear Medicine in Clinical Diagnosis and Treatment, 2-Volume Set 2. European Association of Nuclear Medicine (EANM) guidelines <a href="https://www.eanm.org/publications/guidelines/">https://www.eanm.org/publications/guidelines/</a> 3. Download from AppStore free application of European Association of Nuclear Medicine (EANM) Clinical Decision Support European Nuclear Medicine Guide 4. IAEA Human Health Campus <a href="https://www.iaea.org/publications/10368/nuclear-medicine-physics">https://www.iaea.org/publications/10368/nuclear-medicine-physics</a>		
<b>Supplementary</b>		
European Journal of Nuclear Medicine, Nuclear Medicine Review		

<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>
<i>e.g. G.K1, G.S1, K1</i>	<i>This field defines the methods used for grading students e.g. pop quiz, test, written report etc.</i>	<i>e.g. threshold number of points</i>
G.K1, G.S1,	Oral credits. Applies to students who were present on all days of the course. Absences must be made up with another student group Alternatively, an oral answer is possible after obtaining the lecturer's consent.	70% of the correct answers

<b>9. ADDITIONAL INFORMATION</b> ( <i>information essential for the course instructor that are not included in the other part of the course syllabus e.g. if the course is related to scientific research, detailed description of, information about the Science Club</i> )		
Oral credits. Revision credit: additional date to be agreed with the course tutor in oral form.		
The classes will be held on: room allocation is not yet available.		
<b>The classes will be held on:</b> 12 <sup>th</sup> - 15 <sup>th</sup> November 2024 in room 125-127 CBI, (8.30-12.00) group 3 7 <sup>th</sup> - 10 <sup>th</sup> January 2025 in room 1119 CBI (8.30-12.00) group 4 28 <sup>th</sup> - 31 <sup>st</sup> October 2024 in room 125-127 CBI (8.30-12.00) group 2 16 <sup>th</sup> - 20 <sup>th</sup> December 2024 in room 125-127 CBI (8.30-12.00) group 1		

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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.





## Propedeutics of Stomatology

### 1. IMPRINT

<b>Academic Year</b>	2024/2025
<b>Department</b>	Faculty of Medicine
<b>Field of study</b>	Medicine
<b>Main scientific discipline</b>	Medical science
<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>	credit

<b>Educational Unit / Educational Units</b>	Department of Periodontology and Oral Diseases (WLS5), UCS University Dentistry Center at 6 Binińskiego St, 02-097 Warsaw e-mail: sluzowki@wum.edu.pl
<b>Head of Educational Unit / Heads of Educational Units</b>	Assoc. Prof. Maciej Czerniuk, MD PhD, e-mail: <a href="mailto:maciej.czerniuk@wum.edu.pl">maciej.czerniuk@wum.edu.pl</a>
<b>Course coordinator</b>	Dr n. med. Andrzej Miskiewicz; phone (22) 2701616, mobile 513445674, e-mail: <a href="mailto:andrzej.miskiewicz@wum.edu.pl">andrzej.miskiewicz@wum.edu.pl</a>
<b>Person responsible for syllabus</b>	Dr n. med. Andrzej Miskiewicz; phone (22) 2701616, mobile 513445674, e-mail: <a href="mailto:andrzej.miskiewicz@wum.edu.pl">andrzej.miskiewicz@wum.edu.pl</a>
<b>Teachers</b>	prof. Kazimierz Szopiński – dental radiology dr hab. n.med Ewa Czochrowska – orthodontics dr n.med. Anna Widmańska - orthodontics dr n.med Andrzej Miskiewicz – periodontology dr n.med. Zygmunt Stopa – maxillofacial surgery dr n.med. Iwona Sobiech – pediatric dentistry lek. stom Magdalena Świątkowska-Bury – pediatric dentistry

## 2. BASIC INFORMATION

<b>Year and semester of studies</b>	III year, 6-th semester	<b>Number of ECTS credits</b>	1.00
<b>FORMS OF CLASSES</b>		<b>Number of hours</b>	<b>ECTS credits calculation</b>
<b>Contacting hours with academic teacher</b>			
Lecture (L)		18	1
Seminar (S)		-	-
Classes (C)		-	-
e-learning (e-L)		-	-
Practical classes (PC)		-	-
Work placement (WP)		-	-
<b>Unassisted student's work</b>			
Preparation for classes and completions		-	-

<b>3. COURSE OBJECTIVES</b>	
O1	Gaining basic knowledge about oral and maxillofacial conditions.
O2	Learning the principles of clinical and radiological diagnostics of oral cavity diseases.
O3	Getting acquainted in the interactions between oral medicine and systemic health.

<b>4. STANDARDS OF LEARNING – DETAILED DESCRIPTION OF EFFECTS OF LEARNING (concerns fields of study regulated by the Regulation of Minister of Science and Higher Education from 26 of July 2019; does not apply to other fields of study)</b>	
<b>Code and number of effect of learning in accordance with standards of learning</b>	<p><b>Effects in the field of:</b> <i>(in accordance with appendix to the Regulation of Minister of Science and Higher education from 26th of July 2019)</i></p> <p><b>Knowledge of the masticatory system structure and function, the patomechanism of periodontal diseases. Knowledge of the prophylaxis in children and adolescents. Knowledge of the principles of dental trauma treatment.</b></p>

**Knowledge – Graduate\* knows and understands:**

G.K1	F.W1: causes, symptoms, principles of diagnosis and therapeutic treatment in relation to the most common diseases requiring surgical intervention taking into account the distinctions of childhood, in particular: bone fractures and organ injuries
G.K2	F.W13. causes, symptoms, principles of diagnosis and therapeutic treatment in the case of the most common diseases of the central nervous system in terms of: cranial-cerebral injuries,
G.K3	E.W3. causes, symptoms, principles of diagnosis and therapeutic treatment of the most common diseases in children: acute and chronic diseases of the upper and lower respiratory tract, congenital defects of the respiratory tract, tuberculosis, cystic fibrosis, asthma, allergic rhinitis, urticaria, anaphylactic shock, angioedema,
G.K4	E.W7. reasons, symptoms, diagnostic and treatment procedures of the most frequent internal diseases and their complications in adult patients: digestive system diseases, including oral cavity.
G.K5	E.W24. basics of early detection of tumours and oncology screening principles

**Skills– Graduate\* is able to:**

G.S1	E.U1. collect medical history from adult patients;
G.S2	E.U3. conduct a complete and targeted physical examination in adults;

\* In appendix to the Regulation of Minister of Science and Higher education from 26th of July 2019 „graduate”, not student is mentioned.

<b>5. ADDITIONAL EFFECTS OF LEARNING (non-compulsory)</b>	
<b>Number of effect of learning</b>	<p><b>Effects in the fields of:</b></p> <p>Knowledge of co-dependencies between periodontal disease and systemic health.</p>
<b>Knowledge – Graduate knows and understands:</b>	

K1	G.W1. health assessment methods of an individual and a population, disease and medical procedure classification;
K2	E.W23. environmental and epidemiological conditions of the most common cancers;

**Skills– Graduate is able to:**

S1	E.U1. collect medical history from adult patients;
S2	E.U3. conduct a complete and targeted physical examination in adults;

**Social Competencies – Graduate is ready for:**

SC1	F.U1. assist in a typical surgery, prepare the surgical field and use local anaesthetics at the operated area;
SC2	F.U3. observe the rules of asepsis and antisepsis;

<b>6.</b>		
<b>Form of class</b>	<b>Class contents</b>	<b>Effects of Learning</b>
Lecture 1	The new approach in pediatric dentistry.	G.K1, O1, K1
Lecture 2	Dental trauma.	G.K1, G.K2
Lecture 3	Selected diseases of the oral cavity requiring surgical approach.	G.K5, G.K3, S1, S2
Lecture 4	Maxillofacial surgical treatment.	G.S1, SC1, SC2
Lecture 5	Orthodontic diagnosis.	G.S2, E.U3
Lecture 6	Orthodontic treatment.	G.K1
Lecture 7	Relationship between periodontal and systemic diseases.	G.K4, O2, S1
Lecture 8	Symptoms of systemic diseases and disorders in the oral cavity.	O3, K2
Lecture 9	Introduction to dentomaxillofacial radiology. Part I.	G.K1
Lecture 10	Introduction to dentomaxillofacial radiology. Part II.	G.K2

<b>7. LITERATURE</b>
<b>Obligatory</b>
Periodontology: The Essentials. <i>Hans-Peter Mueller</i> ; Georg Thieme 2015 Ed. II
<b>Supplementary</b>
Clinical Periodontology and Implant Dentistry. <i>Niklaus P. Lang and Jan Lindhe</i> ; John Wiley & Sons 2015

<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>

O1-O3	Credit	Presence
G.K1-G.K5	Credit	Presence
G.S1-G.S2	Credit	Presence
K1-K2	Credit	Presence
S1-S2	Credit	Presence
SC1-SC2	Credit	Presence

**9. ADDITIONAL INFORMATION** (*information essential for the course instructor that are not included in the other part of the course syllabus e.g. if the course is related to scientific research, detailed description of, information about the Science Club*)

**Knowledge from the anatomy and physiology, confirmed with the passed curricula on the 1st and 2nd year. Crediting the propedeutics of stomatology is based on attendance at all lectures. Therefore, attendance at all lectures is necessary to obtain a credit for the course. It is not possible to repeat a given lecture, as it is held only once and only in the summer semester.**

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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.

## VOCATIONAL TRAINING

**Internal Medicine – 4 weeks – 140h**  
**3rd year, 6-year program ED students**  
**Faculty of Medicine**

The summer clinical clerkships are mandatory for students to be assigned a pass for the whole year's academic performance since they are an inherent part of the medical instruction provided throughout the year of study.

Upon completion of the third year students are required to have one-month clinical clerkships at a teaching hospital in Poland or selected foreign countries.

The curriculum of clinical clerkship comprises:

a four-week training in the internal medicine ward.

The head of the ward or an appointed assistant is responsible for providing a detailed program of the training and scheduled duties as well as supervision of students' clinical performance.

Students carry out the work which is that of a regular physician and are supervised by a physician in charge.

During the training students are obliged to have four twenty-four-hour shifts (two on each ward) when they accompany the doctor on duty while he/she performs all the necessary clinical activities and procedures.

The goal of the clinical instruction is to make a practical use of the knowledge acquired in the course of the study e.g., bacteriology, virology, pathomorphology, pathophysiology, pharmacology, and particularly of the clinical subjects i.e. introduction, to medicine and pediatrics.

The clinical instruction should include the following aspects:

- information about the organization of medical ward and their cooperation with the outpatients' department,
- further improvement in taking histories and performing physical examination,
- particularly concerned with assessment of patients' general condition and their psychology,
- planning and collecting specimens for accessory investigations and interpretation of the results,
- improving the skills in differentiating and diagnostic basic clinical entities, particularly
- acute cases, and principles of treatment,
- providing first aid,
- performing everyday clinical procedures (injections and intravenous infusions, catheterization, lumbar puncture, bone marrow puncture and paracentesis of the body cavities), participation in ward rounds and consultations by other specialists

**Throughout the course of the training students are expected to make records of their activities and procedures performed. They are also assessed by the instructor in charge and are finally granted their passing mark by the head of the department. Certificates written in English or translated should be submitted to the Dean's Office of the Medical University of Warsaw by September 20th of the subsequent academic year.**