MEDICAL UNIVERSITY OF WARSAW

FACULTY OF MEDICINE

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

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

1st YEAR CURRICULUM

6-year program

Academic year: 2025/2026

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

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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 and 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 –

Events Coordinator – Dyia Bachour

Events Coordinator – Divit Amarnani

YEAR REPRESENTATIVE:

TBA – 1 year

www: *https://ed.wum.edu.pl/edsq*
https://edsqmuw.wixsite.com/wumedsq

SCHEDULE – ACADEMIC YEAR 2025/2026

6-year program

WINTER SEMESTER – 01.10.2025 – 15.02.2026

STUDENT'S ACADEMIC CLASSES:	01.10.2025 – 21.12.2025
	05.01.2026 – 25.01.2026
WINTER HOLIDAYS:	22.12.2025 – 04.01.2026
EXAM SESSION:	**26.01.2026 – 01.02.2026**
DAYS OFF BETWEEN SEMESTER:	02.02.2026 – 08.02.2026
RETAKE EXAM SESSION:	09.02.2026 – 15.02.2026

SUMMER SEMESTER – 16.02.2026 – 30.09.2026

STUDENT'S ACADEMIC CLASSES:	16.02.2026 – 01.04.2026
	09.04.2026 – 26.04.2026
	04.05.2026 – 14.06.2026
EASTER HOLIDAYS:	02.04.2026 – 08.04.2026
SPRING HOLIDAYS:	27.04.2026 – 03.05.2026
DAYS OFF BEFORE EXAM SESSION:	15.06.2026 – 21.06.2026
EXAM SESSION:	**22.06.2026 – 12.07.2026**
SUMMER HOLIDAYS:	13.07.2026 – 30.09.2026
RETAKE EXAM SESSION:	31.08.2026 – 13.09.2026

Curriculum of 1st year of 6-year 2025/2026 ED program and the list of contents

1st year

page	subject	form of credit	semester	total no of hours	including				ECTS
					lecture	seminar	class	practical	
5	Clinical Anatomy	exam	1&2	180	20		160		21
22	Histology with embryology and cytophysiology	exam	1&2	120	20	30	70		12
31	Occupational Safety and Health at Work/Study	credit	1	4	4				0
36	Biophysics	credit	2	30	5	10	15		2
42	Statistics and Medical Informatics	credit	1&2	35	5	6	24		2
48	History of Medicine	credit	2	35	35				2
53	Medical Ethics with Elements of Philosophy	credit	1	30	20	10			2
58	Medical Communication	credit	1&2	18	18				1
62	Basic Polish	credit	1&2	70			70		5
67	Introduction to Molecular Biology	credit	1	20		5	15		2
71	Propedeutics of Addiction Medicine	credit	2	15		5	10		1
77	Library Training	credit	1&2	2		2			0
82	Sport training	credit	1	60			60		0
86	Medical Psychology	credit	1	20		10	10		2
91	First Aid with the Elements of Nursing	credit	2	45	15	6	24		3
	Optional course	credit	1&2	90		90			6
97	Vocational training - Patient care	credit	2	120				120	4
				894	142	174	458	120	65

Clinical Anatomy

1. IMPRINT	
Academic Year	2025/2026
Department	Faculty of Medicine
Field of study	Medicine
Main scientific discipline	Medical Science
Study Profile	general academic
Level of studies	uniform MSc
Form of studies	Full time studies
Type of module / course	obligatory
Form of verification of learning outcomes	**exam**
Educational Unit / Educational Units	DEPARTMENT OF DESCRIPTIVE AND CLINICAL ANATOMY CENTER OF BIOSTRUCTURE RESEARCH Warsaw, 5 Chałubińskiego St., ph./fax 48 22 629-52-83 e-mail : anatomy@wum.edu.pl
Head of Educational Unit / Heads of Educational Units	Prof. Bogdan Ciszek, MD, PhD
Course coordinator	**Tymon Skadorwa, MD, PhD** DEPARTMENT OF DESCRIPTIVE AND CLINICAL ANATOMY CENTER OF BIOSTRUCTURE RESEARCH Warszawa, ul. Chałubińskiego 5, tel./fax 48 22 629-52-83 e-mail : tskadorwa@wum.edu.pl

Person responsible for syllabus	**Tymon Skadorwa, MD, PhD** DEPARTMENT OF DESCRIPTIVE AND CLINICAL ANATOMY CENTER OF BIOSTRUCTURE RESEARCH Warszawa, ul. Chałubińskiego 5, tel./fax 48 22 629-52-83 e-mail : tskadorwa@wum.edu.pl
Teachers	Dr. Tymon Skadorwa, MD, PhD Dr. Maciej Ciołkowski, MD, PhD Dr. Robert Franczyk, MD PhD Dr. Arkadiusz Kowalczyk, MD PhD Mr. Michał Grzegorczyk, PhD Dr. Olga Wierzbieniec, MD Dr. Kamila Sośnicka, MD Dr. Klaudia Podkowa, MD

2. BASIC INFORMATION

Year and semester of studies	Year 1, Semesters 1 and 2 (winter and summer)	**Number of ECTS credits**	21

FORMS OF CLASSES **Contacting hours with academic teacher**	**Number of hours**	**ECTS credits calculation**
Lecture (L)	20	1
Seminar (S)	0	
Classes (C)	160	6
e-learning (e-L)	0	
Practical classes (PC)	0	
Work placement (WP)	0	
Unassisted student's work		
Preparation for classes and completions	350	14

3. COURSE OBJECTIVES

O1	To acquire the knowledge about the construction and usage of anatomical terminology according to the internationally accepted "Terminologia Anatomica".
O2	To be able to name and describe all the anatomical structures dissected during the laboratory classes, understand their development as well as topographical relations.
O3	To understand the relationship between the structure and function of tissues, organs and systems of the human body.
O4	To be able to recognize the anatomical structures in images acquired using various imaging modalities (computed tomography, magnetic resonance imaging, ultrasound imaging, endoscopy).

O5	To understand the principles of biomechanics (movements of joints, function of muscles).
O6	To describe anatomical background of central and peripheral nervous system damage.
O7	To know the spatial, topographical relationships between organs.
O8	To know the surface projections of the organs (e.g. projection of the cardiac valves on the surface of the chest)
O9	To differentiate the normal conditions from pathology basing on post mortem and in vivo methods.

4. STANDARDS OF LEARNING – DETAILED DESCRIPTION OF EFFECTS OF LEARNING

Code and number of effect of learning in accordance with standards of learning	Effects in the field of: *(in accordance with appendix to the Regulation of Minister of Science and Higher education from 29th of September 2023)*
Knowledge – Graduate* knows and understands:	
G.K1/ A.W1	structure of the human body in the topographical approach and the functional approach; appropriate Polish and English anatomical, histological and embryological terminology
Skills– Graduate* is able to:	
G.S1/ A.U3	Explain the anatomical background of the physical examination
G.S2/ A.U4	Correlate the relationships between the anatomical structures basing on in vivo diagnostic studies, especially medical imaging (X-ray, contrast-enhanced studies, computed tomography, magnetic resonance imaging, sonography)

** In appendix to the Regulation of Minister of Science and Higher education from 29th of September 2023 „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	Palpation sites of arterial pulse, nerves, internal organs, muscles, bones and joints
K2	Principles of anatomical research methodology
Skills– Graduate is able to:	
S1	Understand and use images of anatomical structures obtained from anatomical dissections, medical imaging modalities, as well as medical and anatomical iconography
S2	Analyse biomechanics of the joints
S3	Recognize pulse palpation sites, palpation sites of major nerve trunks and typical osseous points

S4	Recognize basic anatomical structures essential for the medical practitioner in specimens and models (see basic points list) in at least 90%
S5	Recognize the remaining anatomical structures in specimens, models, medical images (sonography, X-ray, computed tomography, magnetic resonance imaging) in at least 65%
S6	Design a simple scientific research study in anatomy
Social Competencies – Graduate is ready for:	
SC1	Show respect for the human body (corpse), social groups, religious feelings for the sake of their welfare
SC2	Further self-education with medical confidentiality

6. CLASSES

Form of class	Class contents	Effects of Learning
Lectures 1-10	**WINTER SEMESTER**	
L1 - Lecture 1	Introduction to the gross and clinical anatomy. Organization of the skeletal system.	A.W1
L2 - Lecture 2	General and developmental anatomy of the skull.	A.W1
L3 - Lecture 3	Central nervous system: introduction, development and its implications.	A.W1
L4 - Lecture 4	Circulation of the cerebrospinal fluid and the ventricular system.	A.W1
L5 - Lecture 5	Sensory pathways and centers in the central nervous system. Somatic sensation.	A.W1
L6 - Lecture 6	Sensory pathways and centers in the central nervous system. Special senses.	A.W1
L7 - Lecture 7	Motor pathways and centers in the central nervous system.	A.W1
L8 - Lecture 8	General topography of the neck. Triangles and muscles of the neck. Cervical fascia. Cervical plexus.	A.W1
L9 - Lecture 9	Applied anatomy of the oral cavity.	A.W1
L10 - Lecture 10	Clinical anatomy of the visual and auditory systems.	A.W1
Practical Classes 1-24	**WINTER SEMESTER**	
PC1 – Laboratory class 1	Axial skeleton, Vertebrae, Ribs.	A.W1, A.U3, A.U4
PC2 – Laboratory class 2	Upper extremity.	A.W1, A.U3, A.U4
PC3 – Laboratory class 3	Lower extremity.	A.W1, A.U3, A.U4
PC4 – Laboratory class 4	Bones of the skull 1.	A.W1, A.U3, A.U4
PC5 – Laboratory class 5	Bones of the skull 2.	A.W1, A.U3, A.U4
PC6 – Laboratory class 6	Joints, fossae, canals and spaces of the skull.	A.W1, A.U3, A.U4
PC7 – Laboratory class 7	Radiology in osteology. Repetition.	A.W1, A.U3, A.U4
PC8 – Laboratory class 8	Introduction. Spinal cord. Spinal nerve.	A.W1, A.U3, A.U4
PC9 – Laboratory class 9	Cerebral hemisphere.	A.W1, A.U3, A.U4

PC10 – Laboratory class 10	Diencephalon. Lateral and third ventricles.	A.W1, A.U3, A.U4
PC11– Laboratory class 11	Brainstem, cerebellum. Fourth ventricle. Roots of cranial nerves.	A.W1, A.U3, A.U4
PC12 – Laboratory class 12	Cross-sections of the CNS.	A.W1, A.U3, A.U4
PC13 – Laboratory class 13	Vascular anatomy of the CNS.	A.W1, A.U3, A.U4
PC14 – Laboratory class 14	Identification of elements of the CNS pathways.	A.W1, A.U3, A.U4
PC15 – Laboratory class 15	Radiologic anatomy of the CNS. Repetition.	A.W1, A.U3, A.U4
PC16 – Laboratory class 16	Skin. Neck: triangles, fascias, veins. Cervical plexus.	A.W1, A.U3, A.U4
PC17 – Laboratory class 17	Neck: muscles. Thyroid gland, parathyroids. CCA.	A.W1, A.U3, A.U4
PC18 – Laboratory class 18	Larynx, trachea. ECA. Vagus, accessory nerve. Sympathetic trunk.	A.W1, A.U3, A.U4
PC19 – Laboratory class 19	Muscles of face. Facial nerve and artery. Parotid gland.	A.W1, A.U3, A.U4
PC20 – Laboratory class 20	Oral cavity, teeth, gums, tongue, palate. Hypoglossal nerve.	A.W1, A.U3, A.U4
PC21 – Laboratory class 21	Infratemporal fossa. Nasal cavity. Trigeminal nerve.	A.W1, A.U3, A.U4
PC22 – Laboratory class 22	Orbit, eye. Dura mater. Dural sinuses.	A.W1, A.U3, A.U4
PC23 – Laboratory class 23	Ear. Hearing organ. Temporal bone. Radiologic anatomy of H&N. Repetition.	A.W1, A.U3, A.U4
PC24 – Laboratory class 24	1st Intermediate Credit	A.W1, A.U3, A.U4
Lectures 11-20	**SUMMER SEMESTER**	
L11 - Lecture 11	Topographical and practical anatomy of the back.	A.W1
L12 - Lecture 12	Clinical anatomy of thoracic wall and the breast.	A.W1
L13 - Lecture 13	Applied anatomy of the respiratory system.	A.W1
L14 - Lecture 14	Functional and developmental anatomy of the heart and great vessels.	A.W1
L15 - Lecture 15	Clinical and developmental anatomy of the peritoneal cavity.	A.W1
L16 - Lecture 16	Anatomical basis of abdominal surgery.	A.W1
L17 - Lecture 17	Clinical anatomy of pregnancy and labour.	A.W1
L18 - Lecture 18	Anatomy of the fetus. Anatomical basis of antenatal surgery.	A.W1
L19 - Lecture 19	Clinical anatomy of the upper limb.	A.W1
L20 - Lecture 20	Summary of the Anatomy Course. Conclusion remarks.	A.W1
Practical Classes 25-52	**SUMMER SEMESTER**	
PC25 – Laboratory class 25	Back.	A.W1, A.U3, A.U4
PC26 – Laboratory class 26	Thoracic wall. Breast.	A.W1, A.U3, A.U4
PC27 – Laboratory class 27	Thoracic cavity.	A.W1, A.U3, A.U4
PC28 – Laboratory class 28	Respiratory system.	A.W1, A.U3, A.U4
PC29 – Laboratory class 29	Heart.	A.W1, A.U3, A.U4
PC30 – Laboratory class 30	Posterior mediastinum.	A.W1, A.U3, A.U4
PC31 – Laboratory class 31	Radiology of the thorax.	A.W1, A.U3, A.U4

PC32 – Laboratory class 32	Abdominal wall.	A.W1, A.U3, A.U4
PC33 – Laboratory class 33	Peritoneum.	A.W1, A.U3, A.U4
PC34 – Laboratory class 34	Stomach, celiac trunk, duodenum. Superior mesenteric artery.	A.W1, A.U3, A.U4
PC35– Laboratory class 35	Jejunum, ileum. Large intestine. Inferior mesenteric artery.	A.W1, A.U3, A.U4
PC36 – Laboratory class 36	Liver, spleen, pancreas. Portal vein.	A.W1, A.U3, A.U4
PC37 – Laboratory class 37	Urinary system. Retroperitoneal space.	A.W1, A.U3, A.U4
PC38 – Laboratory class 38	Male genital organs.	A.W1, A.U3, A.U4
PC39 – Laboratory class 39	Female genital organs.	A.W1, A.U3, A.U4
PC40 – Laboratory class 40	Pelvic floor. Perineum.	A.W1, A.U3, A.U4
PC41 – Laboratory class 41	Radiology of abdomen and pelvis.	A.W1, A.U3, A.U4
PC42 – Laboratory class 42	Shoulder and arm.	A.W1, A.U3, A.U4
PC43 – Laboratory class 43	Forearm.	A.W1, A.U3, A.U4
PC44 – Laboratory class 44	Hand.	A.W1, A.U3, A.U4
PC45 – Laboratory class 45	Gluteal region. Thigh.	A.W1, A.U3, A.U4
PC46 – Laboratory class 46	Leg.	A.W1, A.U3, A.U4
PC47 – Laboratory class 47	Foot.	A.W1, A.U3, A.U4
PC48 – Laboratory class 48	Radiology of the limbs.	A.W1, A.U3, A.U4
PC49 – Laboratory class 49	2nd Intermediate Credit.	A.W1, A.U3, A.U4
PC50 – Laboratory class 50	Admission Test	A.W1, A.U3, A.U4
PC51 – Laboratory class 51	2nd Admission Test	A.W1, A.U3, A.U4
PC52 – Laboratory class 52	Repetition	A.W1, A.U3, A.U4

7. LITERATURE

Obligatory

1. Moore KL, Dalley AF, Agur AMR. Clinically oriented anatomy. Philadelphia: Wolters Kluwer/Lippincott Williams & Wilkins
   The basic textbook to prepare for the laboratory classes and theoretical tests. Multiple choice questions are written according to this book and lectures. Please read clinical blue boxes as well – they will expand your understanding of clinical importance of anatomical structures you learn about. Some of clinical issues may be also included in the tests.
2. Snell RS. Clinical neuroanatomy. Philadelphia: Wolters Kluwer Health/Lippincott Williams & Wilkins; 2010
   The basic textbook of clinical neuroanatomy. We recommend it for the CNS section.
3. Fitzgerald MJT, Gruener G, Mtui E. Clinical Neuroanatomy and Neuroscience. Saunders; 2012
   A comprehensive textbook of clinical anatomy of the central nervous system. We recommend it for the CNS section.
4. Dauber W, Feneis H. Pocket atlas of human anatomy : Founded by Heinz Feneis. Stuttgart ; New York: Thieme
   An illustrated dictionary of anatomical nomenclature based on Terminologia Anatomica, useful for practical classes, repetitions and practical tests.
5. FIPAT. Terminologia Anatomica. International Anatomical Terminology. Stuttgart, New York: Thieme; 2011
   The official anatomical terminology. The reference book in case of any discrepancies regarding the terminology used by various authors.

Supplementary

1. Gilroy AM, MacPherson BR, Ross LM, Schünke M, Schulte E, Schumacher U. Atlas of anatomy. New York: Thieme; 2012
   A good and popular anatomical atlas. Our recommendation.
2. Sobotta – Atlas of Human Anatomy or Atlas of Anatomy
   There are numerous editions of one of the most popular anatomical atlases worldwide. Editors and publishers are different, but illustrations are the same.
3. Rohen JW, Yokochi C, Lütjen-Drecoll E. Color atlas of anatomy: A photographic study of the human body. Baltimore: Lippincott Williams & Wilkins; 2011
   An atlas with photographs of real anatomical specimens.

8. VERIFYING THE EFFECT OF LEARNING

Code of the course effect of learning	Ways of verifying the effect of learning	Completion criterion
A.W1 A.U3, A.U4	**In terms of knowledge:** Theoretical Exam in summer session (single best answer test), two Intermediate Credits (at the end of each semester -see Regulations below), Quizzes (multiple choice quiz), answer completion tests, signing structures in illustrations. **In terms of skills:** Practical Exam ("Pin test") in summer session - written naming of selected structures with a standardized assessment method described in detail with examples on the e-learning platform of the Department (mini-OSCE). **In terms os social competences:** prolonged observation by a teacher, clinical problem solving in groups.	**Passing all the Quizzes, obtaining a point threshold for Theoretical and Practical Exams.** The subject ends with a theoretical test exam and a practical exam with a grade. Passing threshold: ≥65% of correct answers in both parts. The verification covers all categories of areas (knowledge, skills and social competences).

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)*

There is the active students' scientific club at the Department of Descriptive and Clinical Anatomy. The membership is granted basing on the passed examination in Clinical Anatomy and one semester internship as the teaching assistant support in the dissection laboratory. The students can join one of the following sections: Neuroanatomy, Clinical Anatomy of the Fetus and Cardiovascular System, Clinical Anatomy of the Locomotor System and Surgery.

INTERNAL REGULATIONS OF THE DEPARTMENT OF DESCRIPTIVE AND CLINICAL ANATOMY
IN ACADEMIC YEAR 2025/2026

1. In order to complete a semester, a year and to pass Final Anatomy Examination student should participate actively in lectures and practical classes.
   CAUTION: During the course of anatomy, the student is supposed to have the knowledge acquired from all previous practical classes and lectures.
2. The course of anatomy is divided into six following modules:
   (a) osteology and arthrology, (b) central nervous system, (c) head and neck, (d) thorax and back, (e) abdomen and pelvis, (f) upper and lower extremities..
3. Before the practical class a student is obliged to watch an educational film introducing a given topic, available at the educational platform MUW (www.e-learning.wum.edu.pl/en).
4. A student is obliged to obtain a credit for each of practical classes by completing a quiz available at the educational platform (www.e-learning.wum.edu.pl/en).
   a. quizzes consist of 6 multiple-choice theoretical questions;
   b. they will be available directly after the end of practical class and through the next 24 hours, after this time the quiz will be closed and no additional attempts are planned;

    c. in order to pass the quiz, all questions must be answered correctly (6/6 points), the number of attempts is not limited;
    d. passing the quizzes is mandatory for being allowed to the Intermediate Credit.
5. Moreover, students have to participate in two intermediate credits (60 MCQ points and 60 practical test points).
6. Intermediate Credits are semestral tests covering the material of the semester:
    a. they are organized at the end of each semester;
    b. they include theoretical and practical parts, which are attempted separately;
    c. theorectical part consists of 60 questions (single best answer);
    d. practical part consists of 30 anatomical structures to be recognized;
    e. more than 4 absences (or uncompleted quizzes) excludes the student from being allowed to the Intermediate Credit in a given semester.
7. **Absence exceeding four practical classes per semester excludes completion of the semester. The student is therefore not allowed to take the final examination in anatomy.**
8. Rules for completing a semester and a year:
    a. to pass the anatomy course and be admitted to the Final Exam, it is necessary to obtain a minimum of 78 points for theoretical tests and a minimum of 78 points for practical tests from both Intermediate Credits.
    b. a student who obtained less than 78p for theoretical tests, at the end of the course, takes the theoretical part of Admission Test for the entire material (60 theoretical questions, passing level 65%).
    c. a student who obtained less than 78p for practical tests, at the end of the course, takes the practical part of Admission Test for the entire material (pin test, 30 pins, passing level 65%).
    d. a student who failed the Admission Test will have the 2nd attempt to Admission. Only the failed components are to be retaken (theoretical, practical or both).
    e. the 2nd Admission Test is organized after the closure of the anatomy course - this is an ultimate attempt. No other attempts will be organized.
    f. failure to meet the above conditions shall mean failure to complete the year and not being allowed to sit the Final Exam.
9. The final examination in anatomy is scheduled in summer examination period and consists of two parts: practical (pin) test and theoretical (Multiple Choice Questions test). The level to pass the practical examination is 36/40 basic points (the list of basic points is available at the educational platform MUW) and 76/120 total score. The level to pass MCQ is 76/120. Examination grades according to points: 152-169 – satisfactory, 170-187 – better than satisfactory, 188-205 – good, 206-223 – better than good, 224-240 – very good.
10. Retake of the Final Anatomy Examination is administered in September. Only the failed components are to be retaken.
11. Practical anatomy involves students in the examination and dissection of human subjects. This privileged opportunity relies on the generosity of local people who recognize the value to medicine that the practical study of human anatomy can provide and generously make their bodies available for that purpose to medical and science students.
    It is important that, at all times, you respect that generosity and behave accordingly. The students should wear long trousers or skirts. Shorts and mini-skirts are not allowed. A student violating the dress code will not be allowed to enter the Dissection Room.
12. Much of the course work is carried out in the Dissection Room. Only students of the Medical University of Warsaw who have a valid student ID, wear protective clothing: white surgical gown (fastened at the back), white surgical cap or other type of hair-cover, sleeves rolled up to the elbows, are allowed to enter the Dissecting Rooms. **The protective suit must be put on and taken off outside the Dissection Room**. Every student must wear an ID badge. Disection Rooms are constantly monitored with CCTV cameras.
    Students are allowed to enter the Dissection Room only in time of practical classes of her/his students' group if not otherwise specified.
13. Students are required to arrive on time and to efficiently leave the Dissection Rooms after the end of class. A student who is more than 10 minutes late will not be admitted to the Dissection Room.
14. The rules of admission to Lab Classes, the procedure for entering and leaving the rooms, and the rules for using personal protective equipment are specified in the current ordinances of the Rector, announcements of the University Authorities and the University Team for COVID.
15. Unauthorized persons must not enter the Dissection Rooms.
16. Students MUST care about hygiene. In particular:
    a. have clean hands with short, unpolished nails; no jewelry is allowed,
    b. use protective gloves while examining of specimens,
    c. in the case of minor injuries rinse the wound in tap water and manage it properly.
17. While examining the specimens, sufficient care should be applied to prevent the damage or loss of the specimen.
18. Leaders of the student's groups are responsible for damage or loss of the specimen.
19. Smoking in the area of the Department of Anatomy, as in whole building of Collegium Anatomicum, is prohibited.
20. Eating and drinking in Dissection Rooms is prohibited.
21. The students can, and are encouraged, to bring the anatomical tweezers, books and atlases to the Dissection Rooms.
22. To gain from the practical classes as much as possible, the students should have sufficient theoretical knowledge about the current topic.

23. At the end of practical classes students should fix the specimens according to the teaching assistant suggestions.
24. **Taking of any photos or movies in dissection room is strictly prohibited!**
25. It is not allowed to use mobile phones in the area of the Department of Anatomy!
26. Students who do not follow the regulations and do not react to the warnings can be expelled from the class. In all the cases such event will be reported in student's files. In special cases the Dean will be informed about the student's misbehavior.
27. Due to the changing epidemiological situation, the method of conduction of the anatomy course will depend on the current regulations, orders of the University Authorities and the Head of the Department of Descriptive and Clinical Anatomy. In case of any change the students will be informed accordingly.

BASIC POINTS

GUIDELINES FOR THE SEMESTRAL AND FINAL PIN TESTS

Two structures marked with pins should be recognized on each of thirty stations.

There are 60 seconds of time per station.
It is not allowed to touch, move or rotate specimens.
The maximum score for one pin is 2 points.

Examples:
left superior thyroid a 2p.
right superior thyroid a 1p.
superior thyroid a 1p

thyroid a 0p.
left 0p

Attention! Recognition of single structure in the way suggesting that the structure is paired or multiple = 0p.
Example: right *trachea, left falx cerebri, superior tentorium cerebelli*

On the final examination you need 76 points to pass.
First 20 pins are so called basic points, it means the basic anatomical structures which should be known to every MD.
These points will be scored 2 or 0 points only!

Example: pin shows the left common carotid artery

28. left common carotid artery 2p.
    1. right common carotid artery 0p
    2. common carotid artery 0p.
    3. carotid artery 0p.
    4. carotid 0p

You can make only two mistakes in the basic points section! In order to pass, you need at least 36 points from this section.

OSTEOLOGY AND ARTHROLOGY

When the pin indicates a bone, you have to write the name of the bone and the side

Since the clinical practice often requires more detailed knowledge about some structures, in cases listed below precise recognition of the structure is required.

CRANIUM	**SKULL** **Foramina and canals containing cranial nerves plus:**
canalis caroticus	carotid canal
meatus acusticus externus	external acustic meatus
canalis nasolacrimalis	nasolacrimal canal
fossa hypophysialis	hypophyseal fossa

protuberantia occipitalis externa	external occipital protuberance
sulcus sinus sagittalis superioris	sulcus of superior sagittal sinus
sulcus sinus transversi	sulcus of transverse sinus
sulcus sinus sigmoidei	sulcus of sigmoid sinus
alveolus dentalis	dental alveolus

It is not required to name the bone, but the side has to be given.

OSSA CRANII	**BONES OF THE SKULL**
os frontale	frontal bone
os ethmoidale	ethmoid bone
os temporale	temporal bone
os sphenoidale	sphenoid bone
os parietale	parietal bone
os occipitale	occipital bone
maxilla	maxilla
os zygomaticum	zygomatic bone
os palatinum	palatine bone
os nasale	nasal bone
mandibula	mandible

COLUMNA VERTEBRALIS	**VERTEBRAL COLUMN**
	part of vertebra (body, arch, spinous process) and its name (atlas, axis, prominens), and part of the vertebral column (e.g. spinous process of cervical vertebra)
dens axis	dens of axis (odontoid process)
os sacrum	sacrum
os coccygis	coccyx
promontorium	promontory
discus intervertebralis	intervertebral disc

THORAX	**THORAX**
costa	rib + side
costa prima	first rib
sternum	sternum

EXTREMITAS SUPERIOR	**UPPER EXTREMITY**
scapula: angulus inf., cavitas glenoidalis	scapula: inferior angle, glenoid cavity
clavicula	clavicle
humerus: caput, collum chirurgicum, epicondyli	humerus: head, surgical neck, epicondyli
radius	radius
ulna	ulna
ossa carpi	carpal bones (without side when separate)
ossa metacarpi	metacarpal bones (without side and number when separate)

phalanges	phalanges (without side and number when separate + distal phalanx))

EXTREMITAS INFERIOR	**LOWER EXTREMITY**
os coxae: crista iliaca, fossa iliaca, acetabulum, os pubis, tuber ischiadicum	hip bone: iliac crest, iliac fossa, acetabulum, pubis, ischial tuberosity
femur: caput, collum, trochanter maior, condylus medialis et lateralis	femur: head, neck, greater trochanter, medial and lateral condyle
patella	patella (no side when separate)
tibia: malleolus medialis	tibia: medial malleolus
fibula: malleolus lateralis	fibula: lateral malleolus
ossa tarsi	tarsal bones (without side when separate)
ossa metatarsi	metatarsal bone (without side when separate)
phalanges	phalanges (see upper extremity)

SYSTEMA NERVOSUM CENTRALE	**CENTRAL NERVOUS SYSTEM**
a. basillaris	basilar artery
a. carotis interna	internal carotid artery
medulla oblongata	medulla oblongata
pyramis medullae oblongatae	pyramid of medulla oblongata
pons	pons
radix n. trigemini	root of trigeminal nerve
ventriculus IV	fourth ventricle
vermis cerebelli	vermis of cerebellum
hemispherium cerebelli	cerebellar hemisphere
tonsilla cerebelli	cerebellar tonsil
mesencephalon	mesencephalon (midbrain)
aquaeductus mesencephali	cerebral aqueduct
crus cerebri	cerebral crus
thalamus	thalamus
corpus pineale	pineal body
ventriculus tertius	third ventricle
corpus mamillare	mamillary body
chiasma opticum	optic chiasm
nucleus caudatus	caudate nucleus
nucleus lentiformis	lentifom nucleus
capsula interna	internal capsule
ventriculus lateralis	lateral ventricle
plexus choroideus	choroids plexus
hippocampus	hippocampus
septum pellucidum	septum pellucidum
corpus callosum	corpus callosum
insula	insula
lobus temporalis	temporal lobe
lobus frontalis	frontal lobe
lobus occipitalis	occipital lobe
lobus parietalis	parietal lobe
sulcus lateralis	lateral sulcus

sulcus centralis	central sulcus
fissura longitudinalis cerebri	longitudinal fissure
tractus olfactorius	olfactory tract
bulbus olfactorius	olfactory bulb
medulla spinalis	spinal cord
COLLUM	**NECK**
m. sternocleidomastoideus	sternocleidomastoid
a. carotis communis	common carotid artery
a. carotis interna	internal carotid artery
a. carotis externa	external carotid artery
v. iugularis interna et externa	internal and external jugular vein
trachea	trachea
glandula thyroidea	thyroid gland
os hyoideum	hyoid bone
prominentia laryngis	laryngeal prominence
epiglottis	epiglottis
plica vocalis	vocal fold
cartilago thyroidea	thyroid cartilage
m. digastricus	digastric muscle
n. hypoglossus	hypoglossal nerve
glandula submandibularis	submandibular gland
a. subclavia	subclavian artery
v. subclavia	subclavian vein
plexus brachialis	brachial plexus
n. vagus	vagus nerve
n. phrenicus	phrenic nerve
m. scalenus ant.	scalenus anterior

CAPUT	**HEAD**
a. facialis	facial artery
glandula parotis	parotid gland
labium superius	upper lip
labium inferius	lower lip
rima oris	mouth
palpebra sup.	upper eyelid
palpebra inf.	lower eyelid
nasus externus	external nose
mentum	mentum
m. masseter	masseter
m. temporalis	temporalis
gingiva	gum
lingua	tongue
palatum durum	hard palate
palatum molle	soft palate
uvula	uvula
tonsilla palatina	palatine tonsil
tonsilla pharyngea	pharyngeal tonsil
ostium pharyngeum tubae auditive	pharyngeal orifice of the auditory tube
sinus maxillaris	maxillary sinus

sinus frontalis	frontal sinus
sinus sphenoidalis	sphenoid sinus
concha nasalis inf.	inferior nasal concha
concha nasalis media	middle nasal concha
ganglion trigeminale	trigeminal ganglion
n. alveolaris inf.	inferior alveolar nerve
n. lingualis	lingual nerve
a. maxillaries	maxillary artery
a. temporalis spf.	superficial temporal artery
falx cerebri	cerebral falx
tentorium cerebelli	tentorium of cerebellum
sinus sagittalis sup.	superior sagittal sinus
sinus transversus	transverse sinus
sinus sigmoideus	sigmoid sinus
n. opticus	optic nerve
bulbus oculi	eyeball
cavum tympani	tympanic cavity
auris interna	inner ear

THORAX	**THORAX**
a. axillaris	axillary artery
m. pectoralis maior	pectoralis major
m. latissimus dorsi	latissimus dorsi muscle
n. ulnaris	ulnar nerve
n. medianus	median nerve
n.musculocutaneus	musculocutaneous nerve
n. radialis	radial nerve
n. axillaris	axillary nerve
m. intercostalis ext.	external intercostal muscle
m. intercostalis int.	internal intercostal muscle
a. thoracica interna	internal thoracic artery
n. intercostalis	intercostal nerve
pleura parietalis	parietal pleura
truncus sympathicus	sympathetic trunk
esophagus	esophagus
trachea	trachea
n. vagus	vagus nerve
n. phrenicus	phrenic nerve
v. brachiocephalica	brachiocephalic vein
v. cava sup.	superior vena cava
v. cava inf.	inferior vena cava
v. azygos	azygos vein
ductus thoracicus	thoracic duct
aorta ascendens	ascending aorta
arcus aortae	arch of the aorta, aortic arch
truncus brachiocephalicus	brachiocephalic trunk
a. carotis communis	common carotid artery
a. subclavia	subclavian artery
aorta descendens	descending aorta

truncus pulmonalis	pulmonary trunk
a. pulmonalis	pulmonary artery
bronchus principalis	main bronchus
vena pulmonalis sup.	superior pulmonary vein
vena pulmonalis inf.	inferior pulmonary vein
apex pulmonis	apex of the lung
lobus superior pulmonis	superior pulmonary lobe, superior lobe of the lung
lobus medius pulmonis dx.	middle lobe of right lung
lobus inferior pulmonis	inferior pulmonary lobe, inferior lobe of the lung
apex cordis	apex of heart
atrium sin.	left atrium of heart
auricula sin.	left auricle
atrium dx.	right atrium of heart
auricula dx.	right auricle
valva aortae	aortic valve, valve of aorta
valva trunci pulmonalis	pulmonary valve, valve of pulmonary trunk
valva bicuspidalis	bicuspid valve, mitral valve, left atrioventricular valve
valva tricuspidalis	tricuspid valve, right atrioventricular valve
septum interventriculare	interventricular septum
fossa ovalis	oval fossa, fossa ovalis
ventriculus sinister	left ventricle
ventriculus dexter	right ventricle
a. coronaria sin.	left coronary artery
a. coronaria dx.	right coronary artery
sinus coronarius	coronary sinus
diaphragma	diaphragm
ABDOMEN	**ABDOMEN**
funiculus spermaticus	spermatic cord
umbilicus	umbilicus
m. rectus abdominis	rectus abdominis
linea alba	linea alba
lig. inguinale	inguinal ligament
m. obl. ext. abdominis	external oblique abdominis muscle
peritoneum parietale	parietal peritoneum
omentum maius	greater omentum
ventriculus	stomach
cardia ventriculi	cardiac part of stomach, cardia
fundus ventriculi	fundus of stomach
curvatura ventriculi minor et maior	lesser and greater curvature of stomach
pylorus	pylorus
bulbus duodeni	ampulla of duodenum, superior part of duodenum, duodenal ampulla
duodenum	duodenum
mesenterium	mesentery
ieiunum	jejunum
ileum	ileum
caecum	caecum
appendix vermiformis	vermiform appendix
colon ascendens	ascending colon
colon transversum	transverse colon

colon descsendens	descending colon
colon sigmoideum	sigmoid colon
rectum	rectum
lien	spleen
pancreas	pancreas
lig hepatoduodenale	hepatoduodenal ligament
ductus choledochus	common bile duct
vena portae	hepatic portal vein
lobus sinister	left lobe of liver
lobus dexter	right lobe of liver
lobus caudatus	caudate lobe of liver
lobus quadratus	quadrate lobe of liver
ligamentum teres hepatis	round ligament of liver
aorta	aorta
v. cava inf.	inferior vena cava
truncus celiacus	coeliac trunk
a et v. mesenterica sup.	superior mesenteric artery and vein
a. et v. mesenterica inf	inferior mesenteric artery and vein
vesica fellea	gallbladder

SPATIUM RETROPERITONEALE ET ORGANA UROGENITALIA	**RETROPERITONEAL SPACE AND UROGENITAL ORGANS**
m. psoas maior	psoas major muscle
m. iliacus	iliacus muscle
n. femoralis	femoral nerve
n. obturatorius	obturator nerve
a. iliaca communis, externa et interna	common, external and internal iliac artery
v. iliaca communis, externa et interna	common, external and internal iliac vein
a. v. renalis	renal artery and vein
ren	kidney
pelvis renalis	renal pelvis
glandula suprarenalis	suprarenal gland, adrenal gland
ureter	ureter
vesica urinaria	urinary bladder
truncus symphaticus	sympathetic trunk
nodi lymphatici lumbales	lumbar lymph nodes
excavatio rectouterina	recto-uterine excavation, recto-uterine pouch
uterus	uterus
vagina	vagina
tuba uterina	uterine tube, Fallopian tube
ovarium	ovarium
lig. latum uteri	broad ligament of uterus
testis	testis, testicle
epididymis	epididymis
ductus deferens	ductus deferens
prostata	prostate
urethra masculina	male urethra
corpus cavernosum penis	cavernous body of penis
glans penis	glans penis, glans of penis

scrotum	scrotum
urethra feminina	female urethra
labium maius pudendi	greater pudendal lip
labium minus pudendi	lesser pudendal lip
clitoris	clitoris
anus	anus
m. levator ani	levator ani muscle

MEMBRUM SUPERIUS	**UPPER LIMB**
m. erector spinae	erector spinae muscle
m. latissimus dorsi	latissimus dorsi muscle
m. trapezius	trapezius muscle
m. serratus ant.	anterior serratus muscle
m. subscapularis	subscapular muscle
m. infraspinatus	infraspinatus muscle
m. supraspinatus	supraspinatus muscle
m. deltoideus	deltoid muscle
m. biceps brachii	biceps brachii muscle
m. triceps brachii	triceps brachii muscle
m. brachioradialis	Brachioradialis muscle
m. flexor carpi radialis	flexor carpi radialis muscle
m. flexor carpi ulnaris	flexor carpi ulnaris muscle
m. flexor digitorum spf.	flexor digitorum superficialis muscle
m. flexor digitorum prof.	flexor digitorum profundus muscle
m. extensor digitorum	extensor digitorum muscle
thenar	thenar eminence
hypothenar	hypothenar eminence
a. axillaris	axillary artery
a. brachialis	brachial artery
a. radialis	radial artery
a. ulnaris	ulnar artery
v. basilica	basilic vein
v. cephalica	cephalic vein
n. medianus	median nerve
n. radialis	radial nerve
n. ulnaris	ulnar nerve
n. musculocutaneus	musculocutaneous nerve
unguis	nail

MEMBRUM INFERIUS	**LOWER LIMB**
m. iliacus	Iliacus muscle
m. psoas maior	psoas major muscle
m. gluteus maximus	gluteus maximus muscle
m. gluteus medius	gluteus medius muscle
m. gluteus minimus	gluteus minimus muscle
m. quadriceps femoris	quadriceps femoris muscle
m. sartorius	sartorius muscle

m. adductor magnus	adductor magnus muscle
tractus iliotibialis	iliotibial tract
m. gastrocnemius	gastrocnemius muscle
m. soleus	soleus muscle
tendo Achillis	calcaneal tendon
m. tibialis ant	anterior tibialis muscle
a. v. femoralis	femoral artery and vein
a. v. poplitea	popliteal artery and vein
a. tibialis	tibial artery
v. saphena magna	great saphenous vein
n. ischiadicus	sciatic nerve
n. femoralis	femoral nerve
n. tibialis	tibial nerve
n. peroneus communis	common peroneal nerve
lig. patellae	patellar ligament
lig. cruciatum genus	cruciate ligament of knee
unguis	nail

Basic structure may be marked also in the further (non-basic) part of the exam and in such a case it should be described in a more detailed form to gather the maximal score. For example, if the pin is inserted in the left ulna the name of the specific region of the bone should be given, eg. left ulnar tuberosity.

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.

1. IMPRINT	
Academic Year	2025/2026
Department	Faculty of Medicine
Field of study	Medicine
Main scientific discipline	Medical science
Study Profile	general academic
Level of studies	Uniform MSc
Form of studies	full-time studies
Type of module / course	obligatory
Form of verification of learning outcomes	exam
Educational Unit / Educational Units	Department of Histology and Embryology Center for Biostructure Research 02-004 Warszawa, Chałubińskiego 5 Str.(Anatomicum bldg.) Web site: http://histologia.wum.edu.pl Department office is open for students on working days. Business hours 9: 30 - 14: 00, tel/fax 22 629-5282. Department of Transplantology and Main Tissue Bank Center for Biostructure Research 02-004 Warszawa, Chałubińskiego 5 Str.(Anatomicum bldg.) https://transplantologia.wum.edu.pl/ Department office is open for students on working days. Business hours 9: 30 - 14: 00, tel./fax 22 621 75 43
Head of Educational Unit / Heads of Educational Units	Paweł Włodarski, MD, PhD, Professor Artur Kamiński, Ph.D. Professor
Course coordinator	Paweł Włodarski, M.D., D.D.S., Ph.D., Professor pawel.wlodarski@wum.edu.pl
Person responsible for syllabus	Paweł Włodarski, M.D., D.D.S., Ph.D., Professor pawel.wlodarski@wum.edu.pl
Teachers	Department of Histology and Embryology: Paweł Włodarski, M.D., D.D.S., Ph.D., Professor pawel.wlodarski@wum.edu.pl Jacek Malejczyk, Ph.D., Professor jacek.malejczyk@wum.edu.pl Stanisław Moskalewski, M.D., Ph.D., Professor stanislaw.moskalewski@wum.edu.pl Monika Ołdak, Professor monika.oldak@wum.edu.pl Anna Hyc, Assoc. Prof. anna.hyc@wum.edu.p Anna Iwan, Assoc. Prof. anna.iwan@wum.edu.p

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2. BASIC INFORMATION

Year and semester of studies	1 (1 and 2 semester)	**Number of ECTS credits**	12

FORMS OF CLASSES **Contacting hours with academic teacher**	**Number of hours**	**ECTS credits calculation**
Lecture (L)	20	0,8
Seminar (S)	30	1,2
Classes (C)	70	2,8
e-learning (e-L)	-	
Practical classes (PC)	-	
Work placement (WP)	-	
Unassisted student's work		
Preparation for classes and completions	180	7,2

3. COURSE OBJECTIVES

The aim of the course of Histology and Embryology is to demonstrate and explain structure of the cell, tissues and organs. Starting from the ultrastructure of the cell, which is discussed along with the function of the organelles, microscopic anatomy of all human tissues and major organs is shown. During the classes, functional connection between microscopic anatomy of the organ and the function is highlighted. This is the background for further education of Biochemistry, Physiology and Pathology. Basis of the molecular biology and examples of diagnostic methods are lectured.

O1	Gaining knowledge regarding structure and function of the cell organelles, tissues and organs, as well as morphological adaptation of tissues to their function.
O2	Gaining knowledge regarding the development of the embryo, development and function of fetal membranes and the most common fetal abnormalities.

O3	Gaining knowledge regarding identification of histological specimens and characteristic elements of the tissues under the microscope.
O4	Gaining knowledge regarding processes related to the regulation of differentiation and functions of individual cells and their populations.
O5	Gaining knowledge regarding molecular mechanisms of apoptosis and how cells receive signals from the environment, transmit them into the cell, and regulate intracellular processes.
O6	Gaining knowledge regarding the mechanisms of the cell cycle, the mechanism controlling cell proliferation, and the consequences of their disturbances, which often lead to cancer development.
O7	Gaining knowledge regarding current views on cellular aging and explanation of why cancer cells are considered immortal.
O8	Gaining knowledge regarding basic histochemical and immunocytochemical methods used in modern microscopic diagnostics.
O9	Gaining knowledge regarding methods for preserving tissues intended for transplantation for therapeutic purposes and discussion of the behavior of such grafts in the body.
O10	Gaining knowledge regarding the basics of molecular biology and the fundamental molecular research methods used in modern medical diagnostics.

4. STANDARDS OF LEARNING – DETAILED DESCRIPTION OF EFFECTS OF LEARNING

Code and number of effect of learning in accordance with standards of learning	**Effects in the field of:** *(in accordance with appendix to the Regulation of Minister of Science and Higher education from 29th of September 2023)*
Knowledge – Graduate* knows and understands:	
A.W1.	structure of the human body in the topographical approach (upper and lower limb, chest, abdomen, pelvis, back, neck, head) and the functional approach (skeletal system, muscular system, urinary system, reproductive system, nervous system and sensory system, integumentary system); appropriate Polish and English anatomical, histological and embryological terminology;
A.W2.	cellular structures and their functional specializations;
A.W3.	micro-architecture of tissues, extracellular matrix and organs;
A.W4.	the stages of development of the human embryo, the structure and function of the membranes and placenta, the stages of development of the various organs and the effects of harmful factors on embryonic and foetal development (teratogenic);
B.W.6.	the physio-chemical and molecular basis of the sensory organs;
B.W9.	the structure of lipids and polysaccharides and their functions in cellular and extracellular structures;
B.W10.	I-, II-, III- and IV-order structures of proteins and post-translational and functional modifications of proteins and their significance;
B.W11.	the function of nucleotides in the cell, the I- and II-strand structures of DNA and RNA and the structure of chromatin;
B.W12.	functions of the human genome, transcriptome and proteome and the methods used to study them, the processes of DNA replication, repair and recombination, transcription and translation and degradation of DNA, RNA and proteins, and the concepts of regulation of gene expression;

B.W16.	ways of communication between cells and between the cell and the extracellular matrix and signal transduction pathways in the cell, and examples of disruption of these processes leading to cancer and other diseases;
B.W17.	processes: cell cycle, cell proliferation, differentiation and ageing, apoptosis and necrosis and their importance for organismal functioning;
B.W18.	functions and applications of stem cells in medicine;
B.W19.	basics of excitation and conduction in the nervous system and higher nervous functions, as well as striated and smooth muscle physiology;
B.W21.	ageing processes and organ function changes associated with ageing;
Skills– Graduate* is able to:	
A.U1.	operate an optical microscope, including the use of immersion;
A.U2.	recognise in microscopic images structures corresponding to organs, tissues, cells and cellular structures, describe and interpret their structure and the relationship between structure and function;
B.U8.	use medical databases and correctly interpret the information they contain to solve problems in basic and clinical sciences;

** 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

Number of effect of learning	Effects of learning i time
Knowledge – Graduate knows and understands:	
K5	perceiving and recognizing own limitations and self-assessment of deficits and educational needs
K7	readiness to use objective sources of information
Skills– Graduate is able to:	
S1	
Social Competencies – Graduate is ready for:	
SC1	

6. CLASSES

Form of class	Class contents	Effects of Learning
W – Lectures	1. Structure of cell membranes, membrane transport. 2. Cytoplasm organization – cytoskeleton and adhesion molecules. Selected cell compartments – mitochondrion. 3. Genome structure, DNA replication, DNA repair, DNA transcription. 4. Regulation of transcription and translation, cell differentiation.	A.W1.; A.W2.; A.W3.; A.W4.; B.W6.; B.W9.; B.W10.; B.W11.; B.W12.; B.W16.;

	5. Protein modifications – post-translational processing, intracellular transport, protein degradation, protein export. 6. Cell receptors and signal transduction. 7. Cell cycle regulation, cell division. 8. Cell aging and death. 9. Basics of oncogenesis. 10. Liver. 11. Kidney. 12. Mucosal lymphoid tissue. 13. Eye. 14. Inner ear. 15. Formation of reproductive cells. Fertilization. Implantation. 16. Bilaminar embryonic disc, gastrulation, neurulation, embryo folding. 17. Embryo development from week 4 to 8. 18. Key phenomena during the fetal period. Development and structure of the placenta. 19. Embryonic development disorders – selected clinical syndromes. 20. Cell and tissue banking for medical purposes. Clinical application of tissue and cell transplants.	B.W17.; B.W18.; B.W19.; B.W21.;
(S) Seminars; (C) Practical classes;	S - Microscope, histological technique. C - Cell types. Principles of working with a light microscope. S - Electron microscope. Cellular compartments. C - Ultrastructure of cytoplasmic organelles. S - Ultrastructure of the cell nucleus. C - Cell division. S - Epithelial tissue. C - Specialized structures on the epithelial surface. Glands – histological structure. S - Types of connective tissue proper, adipose tissue – white and brown. C - Connective tissue proper. Adipose tissue. S - Types of cartilage and bone tissue. C - Development of various types of bone tissue – bone remodeling. S - Types of muscle tissue. C - Muscle tissue – skeletal, cardiac, and smooth. S - Nervous tissue. C - Peripheral nervous system – ganglia and peripheral nerves. S - Bone marrow and blood cell formation. C - Evaluation of blood and bone marrow cell morphology. S - Slide demonstration – general histology. C - Practical intermediate examination in general histology. S - Circulatory system, structure and function of endothelial cells. C - Histological structure of the heart, blood vessels, and lymphatic vessels. S - Lymphatic system – cell types and their functions. C - Histological structure and functions of lymphatic organs. S - Structure of oral cavity components; tooth development. C - Digestive system (1) – structure of the tooth and oral mucosa, oesophagus. S - Structure and function of the stomach, small and large intestines. C - Digestive system (2) – histological structure of different sections of the digestive tract.	A.W1.; A. W2.; A.W3.; A. W4.; A.U1.; A.U2.; B.W6.; B.W9.; B.W10.; B.W11.; B.W12.; B.W16.; B.W17.; B.W18.; B.W19.; B.W21.; B.U8.; K5; K7;

	S - Structure and function of the liver, pancreas, and salivary glands. C - Digestive system (3) – histological structure of digestive glands. Lymphatic tissue of the digestive system. S - Functions of different parts of the respiratory system. C - Histological structure of the respiratory system. S - Kidney functions, mechanisms of diuresis. C - Histological structure of the urinary system. S - Skin and skin appendages. C - Structure of the epidermis and dermis. Skin receptors. Structure of hair, sweat and sebaceous glands. Mammary gland. S - Histological structure of the central nervous system. C - Structure of the eye, cerebral cortex, cerebellum, spinal cord. S - Endocrine glands – structure and function. C - Histological structure of endocrine glands. S - Formation of female reproductive cells. C - Histological structure of the female reproductive system. S - Formation of male reproductive cells. C - Histological structure of the male reproductive system. S - Mechanisms of embryogenesis. C - Fertilization, implantation. Structure of the embryo, fetal membranes, and placenta. S - Slide demonstration – microscopic anatomy and embryology. C - Practical intermediate examination in microscopic anatomy and embryology. S - Slide review before the final exam. C - Pre-exam slide demonstration.	

7. LITERATURE

Obligatory

1. Junqueira's Basic Histology: Text and Atlas, last edition
2. Sadler T. W. “Langman’s Medical Embryology”, 2015, Wolters Kluwer Health, thirteenth edition.
3. Cell and Molecular Biology Lippincott’s illustrated Review by Chandar, Viselli

Supplementary

1. Stevens A., Lowe J. “Human Histology” 2005, Elsevier Mosby, third ed.
2. Ross M.H., Pawlina W. “Histology: A text and atlas”, 2011, Lippincott Williams & Wilkins, sixth ed.
3. Gartner L. P., “Textbook of Histology”, Elsevier, last edition.
4. Schoenwolf, Bleyl, Brauer, Francis-West “Larsen's Human Embryology” 5th Ed.
5. Nanci A. “Ten Cate’s - Oral Histology”, 2008, Elsevier, seventh edition or newer

8. VERIFYING THE EFFECT OF LEARNING

Code of the course effect of learning	Ways of verifying the effect of learning	Completion criterion
A.W1., A. W2., A.W3., A. W4., B.W6., B.W9.,	intermediate examination, final examination	minimum 60 % of good answers in total

B.W10., B.W11., B.W12., B.W16., B.W17., B.W18., B.W19., B.W21.,		
A.U1; A.U2..	practical class – notebook drawings with descriptions of structures, practical intermediate examination, practical final examination	credit from the teacher; minimum 60 % of good answers in total in practical intermediate and final examinations
K5; K7	observation by the teacher during the classes	credit from the teacher

9. ADDITIONAL INFORMATION

1. The student research club is supervised by Izabela Młynarczuk-Biały, M.D, Ph.D. and Ryszard Galus, M.D. Ph.D., Associate professor http://histologia.wum.edu.pl - Studenckie Koło Naukowe

General regulations - Histology with Embryology and Cytophysiology for medical students 6ED 2025/2026

Organization of lectures, seminars and classes

1. Teaching of Histology, Embryology, and Cytophysiology is conducted in the form of practical classes, seminars, and lectures.
2. Attendance at lectures, practical classes, and seminars is mandatory. Being more than 15 minutes late will be treated as an absence.
3. Each class begins with a seminar, which is a compulsory part of the session.
4. Students must be substantively prepared for each class. The scope of material is provided in the Topics of classes and lectures.
5. During practical classes, students discuss the topic with the assistant and observe microscopic slides, diagrams, and electronograms. Tissue and organ images viewed under the microscope must be drawn and described (with a legend) in a notebook. Microscopes are placed on tables. After viewing the slides, students must turn off the microscope light and cover the microscope. Removing slides, electronograms, microscopes, or their parts from the classroom is prohibited.
6. Before intermediate examinations and final exam, each student group may borrow a set of demonstration slides. Sets can be exchanged multiple times. Before returning/exchanging a set, slides must be arranged according to the attached list. Students are financially responsible for lost or damaged slides.

Presence in the classes and seminars - Class Completion

1. To pass the semester, students must attend lectures, practical classes, and seminars, and complete all practical classes.
2. To pass a practical class, students must receive a positive grade for the material covered and complete accurate drawings and descriptions of slides.
3. Days scheduled for practical classes and midterms are mandatory.
4. Students are allowed to miss up to 2 lectures and 2 practical classes (with seminars) per semester. A third absence results in failing the semester and disqualification from the intermediate examination, regardless of the reason.
5. Missed or failed classes due to unpreparedness must be made up in a form determined by the Head of the Department at a designated time.

Intermediate examinations

1. Intermediate examination dates are agreed upon with the Teaching Council and are not subject to change.
2. The Department organizes two intermediate examination dates for each section.
3. To be credited for intermediate examination, students must attend lectures, practical classes, and seminars, and complete all practical classes.
4. The program includes three theoretical intermediate examinations: (1) Cytophysiology and General Histology; (2) Microscopic Anatomy and (3) Embryology, and two practical intermediate examinations: (1) General Histology and (2) Microscopic Anatomy with Embryology.
5. Theoretical intermediate examinations (MCQ) for the entire course are conducted in-person using an electronic exam system.
6. Practical intermediate examinations are held in class groups. Failure to pass a practical intermediate examination disqualifies the student from the final exam.
7. A third and final (commission) intermediate examination is conducted in a form determined by the Head of the Department with the Dean’s approval.

8. The midterm test consists of 50 single- or multiple-choice questions and lasts 50 minutes.
9. A minimum of 60% correct answers is required to pass.

   Grading scale:
   2.0 (failed): up to 59%
   3.0 (satisfactory): 60–68%
   3.5 (rather good): 69–76%
   4.0 (good): 77–84%
   4.5 (better than good): 85–92%
   5.0 (very good): 93–100%

10. Any concerns or irregularities regarding the examination or question content must be reported only via the Examination Portal to the Examination Team during or immediately after the test, before leaving the computer room (per "WUM Written Exam Regulations," point 16). Students may review questions only via the Examination Portal immediately after the test, before leaving the room.
11. Objections to questions must be submitted exclusively through the electronic exam system.
12. In case of absence due to health reasons, a medical certificate must be submitted within three working days of the scheduled midterm, or a failing grade will be recorded.

Final examination

1. The final exam covers the content from practical classes, seminars, and lectures.
2. To be eligible for the final exam, students must pass all midterms included in the program.
3. Exam dates are agreed upon with the Teaching Council and are not subject to change.
4. The exam consists of two independent parts: practical and theoretical.
5. Failure in either the practical or theoretical part results in a failing grade for the entire exam.
6. The Head of the Department may allow students who scored in the 96th percentile on midterms to take an early oral exam. Eligible students will be notified by the Department. The application for the early exam must be submitted in writing (form available on the Department's website).
7. Students approved for the early exam must complete the practical part before the oral exam date.
8. In case of absence due to health reasons, a medical certificate must be submitted within three working days of the scheduled exam, or a failing grade will be recorded.
9. The retake exam is held during the retake session. If the retake is failed, the Dean may grant a commission exam upon student request.

Practical examination

1. The practical exam is conducted in a mini-OSCE format.
2. It involves identifying 10 histological slides. A minimum of 6 correct identifications is required. Each additional correct identification earns 1 point; identifying all 10 earns 5 points.
3. Students who fail the practical part in the first attempt can take a test, and a passing result will count as a retake of the practical exam (student needs to retake only practical part during retake session).
4. Students who pass the practical part but fail the theoretical test do not need to retake the practical part in the second exam term (student needs to retake only theoretical part during retake session).
5. Students have the right to review their answer sheets for 2 days after the practical exam during hours designated by the Department.

Theoretical examination

1. The theoretical part is a stationary test conducted via the electronic exam system, consisting of 100 single-choice questions covering general and special histology and embryology. The test lasts 100 minutes.
2. The test includes material discussed in lectures, seminars, and practical classes.
3. A minimum of 60% correct answers is required to pass.

   Grading scale:
   2.0 (failed): up to 59%
   3.0 (satisfactory): 60–68%
   3.5 (rather good): 69–76%
   4.0 (good): 77–84%
   4.5 (better than good): 85–92%

5.0 (very good): 93–100%

4. Any concerns or irregularities regarding the exam or question content must be reported only via the Examination Portal to the Examination Team during or immediately after the test, before leaving the computer room (per "WUM Written Exam Regulations," point 16). Students may review questions only via the Examination Portal immediately after the test, before leaving the room.
5. Objections to questions must be submitted exclusively through the electronic exam system.

Final grade

1. The final grade is based on the results of both parts of the exam. Points from both parts are combined.
2. Points from the practical exam are added only for students who passed the theoretical test.
3. Practical exam points are added only once. They are not awarded during the retake session.

Department Policy on Cheating

Cheating during exams violates ethical standards and the WUM Study Regulations. Active and passive participants will be removed from the exam and receive a failing grade. Disciplinary action will also be taken.

Active cheating includes copying answers from others or using unauthorized notes or electronic devices during the exam. Bringing such devices to exams is prohibited. Passive cheating includes allowing others to copy your answers. Students must take care to prevent others from copying their work.

The Head of the Department requires strict adherence to these rules by both students and examiners.

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

Occupational Safety And Health At Work/Study

(BHP)

Bezpieczeństwo i Higiena pracy (BHP)

1. IMPRINT

Academic Year	2025/2026
Department	Faculty of Medicine

Field of study	Medicine
Main scientific discipline	Medical sciences
Study Profile	General academic
Level of studies	Uniform MSc
Form of studies	Full time studies
Type of module / course	Obligatory
Form of verification of learning outcomes	Completion
Educational Unit / Educational Units*)*	Department of Social Medicine and Public Health (1M33) ul. Adolfa Pawińskiego 3a, 02-106 Warszawa pok. A 318 tel. (+48 22) 116 63 35 msizp@wum.edu.pl Department of Labor Protection and Environment (AB) ul. Żwirki i Wigury 81, pok. 60, Warsaw Tel. 22-57-20-881 elzbieta.domaszewicz@wum.edu.pl
Head of Educational Unit / Heads of Educational Units	Prof. MD Aneta Nitsch-Osuch, (1M33) Macin Kowalczyk, MSc (AB)
Course coordinator	Irena Kosińska, MSc, PhD irena.kosinska@wum.edu.pl 664-268-514
Person responsible for syllabus *)*	Irena Kosińska MSc, PhD
Teachers	Irena Kosińska, MSc, PhD Sylwia Ziarek , MSc

2. BASIC INFORMATION

Year and semester of studies	I year, I semester	**Number of ECTS credits**	0,00

FORMS OF CLASSES **Contacting hours with academic teacher**	**Number of hours**	**ECTS credits calculation**
Lecture (L)	4 (lecture on e-learning)	0,00
Seminar (S)		
Practical classes (C)		

e-learning (e-L)		
Unassisted student's work		
Student's preparation for a seminar		
Student's preparation for a class		
Preparation for classes and completions (exam)	2	0,00

3. COURSE OBJECTIVES

O1	The aim of education is to familiarize students with the principles of occupational health and safety and fire safety during their studies at the Medical University of Warsaw, with particular emphasis on the risks associated with practical classes The subject is implemented under the Regulation of the Minister of Science and Higher Education of 30 October 2018 on how to ensure safe and hygienic working and education conditions at the university (Journal of Laws 2018, item 2090). (Pursuant to Article 51 paragraph 2 of the Act of 20 July 2018 - Law on Higher Education and Science (Journal of Laws, item 1668 and 2024))

4. STANDARDS OF LEARNING – DETAILED DESCRIPTION OF EFFECTS OF LEARNING

Code and number of effect of learning in accordance with standards of learning	**Effects in the field of:** *(in accordance with appendix to the Regulation of Minister of Science and Higher education from 29th of September 2023)*
Knowledge – Graduate* knows and understands:	
C.W11.	the epidemiology of viral, bacterial, fungal and prion infections and parasitic infections, including their geographical distribution;
C.W12.	the pathogenesis and pathophysiology of infections and contagions and the impact of pathogens such as viruses, bacteria, fungi, prions and parasites on the human body and population, including their modes of action, the consequences of exposure to them and the principles of prevention;
C.W17.	principles of disinfection, sterilisation and aseptic management;
D.W20.	the concepts of patient safety and safety culture and their organisational, communication and management aspects.
G.W3.	epidemiology of infectious diseases, including those related to health care, and non-infectious diseases, types and methods of prevention at various stages of the natural history of the disease, and the role and principles of epidemiological surveillance;
Skills– Graduate* is able to:	
E.U15.	use personal protective equipment appropriate to the clinical situation;

G.U8.	act in a way that prevents undesirable events and ensures maintaining quality in the protection of patient health and safety, monitors and responds to the occurrence of adverse events, informs about their occurrence and analyzes their causes;
G.U10.	organize the work environment in a way that ensures the safety of the patient and other people, taking into account the influence of human factors and ergonomic principles;
H.U24.	use personal protective equipment appropriate to the clinical situation;

** In appendix to the Regulation of Minister of Science and Higher education from 29th of September 2023 „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	
Skills– Graduate is able to:	
S1	
Social Competencies – Graduate is ready for:	
SC1	

6. CLASSES

Form of class	**Class contents**	**Effects of Learning**
e-learning (e-L)	**Lecture 1**. Legal regulations in Occupational Safety and Hygiene (student obligations and right) Potential threats on workplace during the study (physical, chemical, biological, psychosocial factors) and protection against them. Post exposure prophylaxis procedure (PEP) tasks entailing exposure to HIV, HBV, HCV;	C.W11. C.W12. C.W17. D.W20 G.W3. E.U15. G.U8. G.U10. H.U24.
e-learning (e-L)	**Lecture 2**. Principles of ergonomy (health aspects of work on computer, illumination)	C.W11. C.W12. C.W17. D.W20 G.W3. E.U15. G.U8. G.U10. H.U24.
e-learning (e-L)	**Lecture 3**. Proceedings in case of accident at work and in the event of special risk (fire, failure, a terrorist attack, flood and other) Principles of evacuation from buildings	C.W11. C.W12. C.W17. D.W20

		G.W3. E.U15.G.U8. G.U10.H.U24.
e-learning (e-L)	**Lecture 4**. Principles to administer first aid	C.W11. C.W12. C.W17. D.W20 G.W3. E.U15. G.U8. G.U10. H.U24.

7. LITERATURE

Obligatory

1. Training materials (from lectures)
2. Internet site: www.osha.eu.int, www.who.int
3. Barry S. Levy (ed.), David H. Wegman (ed.), Sherry L. Baron (ed.), Rosemary K. Sokas (ed.), Occupational and Environmental Health (7th edn),2017, Oxford University Press.
4. Levy B.S., Wegman D., H.: Occupational Health, 2011

Supplementary

1. Journal of Occupational & Environmental Medicine (selected number)
2. www.cdc.gov/niosh, www.ilo.org, www.ciop.pl

8. VERIFYING THE EFFECT OF LEARNING

Code of the course effect of learning	Ways of verifying the effect of learning	Completion criterion
e-learning (e-L) (e-L) 1 - (e-L) 4 C.W11. C.W12. C.W17. D.W20 G.W3. E.U15. G.U8. G.U10. H.U24.	Obligatory participation in e-learning lectures. Survey and test solution. Obtaining a certificate. Pass test: (20 single-choice questions), max 20 points can be obtained for the correct solution of the test - Test evaluated according to the criterion given on the right.	Completing the course consists of: 1. Preparation of the student to pass the subject - in accordance with the topics of the course and content of education and applicable literature 2.First, you should complete questionnaires before starting the test. Questionnaire . examine the general state of the Student's knowledge of hygiene rules, 3. Test solution: (the test continues 10 min) Passing the test **Criterion evaluation:** 2.0 (failed) - Receiving <12 points of correct answers from the test, absence from the lecture, no completed questionnaire. 3.0 (satsfactory) - meeting all the criteria for passing,(test - 12-14points) 3.5 (rather good) - meeting all pass criteria, (test - 15-16 points)

		4.0 (good) - meeting all criteria for passing, (test- 17 points) 4.5 (more then good) - meeting all pass criteria, (test: 18 points) 5.0 (very good) - meeting all the criteria for passing, (test: 19-20 points)

9. ADDITIONAL INFORMATION

1. Classes are held in the form of e-learning on the e-learning platform of the Medical University of Warsaw.
2. The condition of passing the course is a positive grade from the test completing the e-learning course and completing the survey. You can take the test a maximum of two times.
3. Completion of the course takes place on the e-learning platform in the first semester. The personally signed Certificate should be sent to the address bhpstudent@wum.edu.pl
4. If the course is not passed, it is necessary to contact the course coordinator - dr inż. Irena Kosińska (irena.kosinska@wum.edu.pl, ul. Adolfa Pawińskiego 3a, 02-106 Warszawa pok. A 318.
5. Rewriting the course credit is done with the consent of the Head of the Department of Social Medicine and Public Health Prof. MD Aneta Nitsch-Osuch (an application should be submitted to the secretariat of the Department p.101, at the beginning of the winter semester).
6. The Scientific Society of Hygiene and Prevention operates at the Department of Social Medicine and Public Health (contact irena.kosinska@wum.edu.pl) and the website of the circle: www.skn-higiena-profilaktyka.wum.edu.pl), implemented topics: Hygiene environment and nutrition.
7. Deadline for completing the subject on the basis of e-learning of the Medical University of Warsaw.

ATTENTION
The final 10 minutes of the last class of the block/semester/year should be allotted for students to fill out the Survey of Evaluation of Classes and Academic Teachers

Biophysics

1. IMPRINT

Academic Year	2025/2026
Department	Faculty of Medicine

Field of study	Medicine
Main scientific discipline	Medical sciences
Study Profile	General academic
Level of studies	Uniform MSc
Form of studies	Full time studies
Type of module / course	Obligatory
Form of verification of learning outcomes	Credit
Educational Unit / Educational Units	Department of Biophysics, Physiology and Pathophysiology Faculty of Health Sciences, Medical University of Warsaw, 5 Chałubińskiego Str., 02-004 Warsaw phone: +48 22 6286334 phone/fax: +48 22 6287846
Head of Educational Unit / Heads of Educational Units	Dariusz Szukiewicz, PhD, DSc, ProfTit
Course coordinator	Piotr Jeleń, MSc, PhD e-mail: piotr.jelen@wum.edu.pl phone: +48 22 6286334
Person responsible for syllabus	Piotr Jeleń, MSc, PhD e-mail: piotr.jelen@wum.edu.pl phone: +48 22 6286334
Teachers	Dariusz Szukiewicz, PhD, DSc, ProfTit Maria Sobol, PhD, DSc Agnieszka Malinowska, MSc, PhD Maciej Pylak, MSc, PhD Piotr Jeleń, MSc, PhD

2. **BASIC INFORMATION**

Year and semester of studies	second semester of the first year	**Number of ECTS credits**	2,00

FORMS OF CLASSES **Contacting hours with academic teacher**	**Number of hours**	**ECTS credits calculation**
Lecture (L)	5	0.2
Seminar (S)	10	0,4

Classes (C)	15	0,6
e-learning (e-L)		
Practical classes (PC)		
Work placement (WP)		
Unassisted student's work		
Preparation for classes and completions	20	0,8

3.	**COURSE OBJECTIVES**
O1	Physics of human body
O2	Impact of physical factors on human body
O3	Physical bases of chosen imaging and therapeutic techniques in medicine

4. STANDARDS OF LEARNING – DETAILED DESCRIPTION OF EFFECTS OF LEARNING

Code and number of the effect of learning in accordance with standards of learning	**Effects in the field of:** *(in accordance with appendix to the Regulation of Minister of Science and Higher education from 26th of July 2019)*
Knowledge – Graduate* knows and understands:	
B.W4	physical laws describing fluid flow and factors affecting vascular resistance to blood flow;
B.W5	natural and artificial sources of ionising radiation and their interaction with matter;
B.W6	the physico-chemical and molecular basis of the sensory organs;
B.W7	the physical basis of non-invasive imaging methods;
B.W8	the physical basis of selected therapeutic techniques;
Skills– Graduate* is able to:	
B.U1	use knowledge of the laws of physics to explain the effects of external factors such as temperature, acceleration, pressure, electromagnetic fields and ionising radiation on the human body;
B.U2	assess the effect of ionising radiation dose on normal and pathologically altered tissues of the body and comply with the principles of radiological protection;

** 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:	
Skills– Graduate is able to:	
Social Competencies – Graduate is ready for:	

6. CLASSES

Form of class	Class contents	Effects of Learning
Lecture L1	Biophysics in contemporary medicine.	B.W4, B.W5, B.W6, B.W7, B.W8
Lecture L2	The basics of ionising radiation and radiation protection	B.W5, B.W8
Seminar S1	Introduction to thermodynamics. Biological membranes (passive and active transport across a cell membrane, resting membrane potential, action potential).	B.W6, B.U1
Seminar S2	Biophysics of circulation (basic physical laws of fluid flow, types of fluids in fluid mechanics, laminar, turbulent and pulsatile flow, blood circulation system, physical properties of blood and blood vessels).	B.W4
Seminar S3	Heart electrical activity (genesis of ECG, heart axis).	B.W7
Seminar S4	Respiratory biophysics (structure of the lungs, mechanics of breathing, respiratory cycle, gas flow in airways partial pressures of gases). Spirometry (pulmonary volumes and capacities). Respiration under usual and unusual conditions.	B.W4, B.U1
Seminar S5	Imaging techniques in medicine (CT, PET, SPECT, MRI).	B.W7
Practical class PC1	Sound waves. Physical bases of hearing. Audiometry screening and interpretation.	B.W6, B.U1
Practical class PC2	Physical basics of ultrasonography.	B.W7
Practical class PC3	Doppler ultrasonography. Blood flow characteristics in arteries.	B.W4, B.W7
Practical class PC4	Biophysics of vision (image formation in the human eye, eye accommodation, vision defects and their correction, eyepiece magnification).	B.W6
Practical class PC5	X rays – measurements and interpretation. Health effects of ionizing radiation absorption. Principles of radiological protection.	B.W5, B.W8, BU2

7. LITERATURE

Obligatory

1. Daviodovits P.: Physics in Biology and Medicine (6-th ed.), Academic Press, 2024.

2. Herman I.P.: Physics of the Human Body, Springer, Berlin-Heidelberg-New York, 2016.

3. Ronto G., Tarjan I. (Eds.): An Introduction to Biophysics with Medical Orientation, (4th ed.), Akadémiai Publishing Company, Budapest, 2003.

Supplementary

1. Glaser, R.: Biophysics, Springer-Verlag 2012.

2. Hobbie R.K., Roth B.J.: Intermediate Physics for Medicine & Biology (5-th ed.), Springer International Publishing AG, 2015.

3. Malmivuo J., Plonsey R.: Bioelectromagnetism, - Principles and Applications of Bioelectric and Biomagnetic Fields. New York, Oxford University Press, 1995.

4. Samuel J. Ling, Truman State University, Jeff Sanny, Loyola Marymount University William Moebs formerly of Loyola Marymount University (senior contributing authors)
University Physics (Vol 1, Vol 2, Vol 3) Access for free at openstax.org.

8. VERIFYING THE EFFECT OF LEARNING

Code of the course effect of learning	Ways of verifying the effect of learning	Completion criterion
B.W4	Quiz, written report, final test	threshold score: 60 %
B.W5	Quiz, written report, final test	threshold score: 60 %
B.W6	Quiz, written report, final test	threshold score: 60 %
B.W7	Quiz, written report, final test	threshold score: 60 %
B.W8	Quiz, written report, final test	threshold score: 60 %
B.U1	Positive assessment of the skills acquired during the classes	sufficient skill acquisition assessed by a teacher
B.U2	Positive assessment of the skills acquired during the classes	sufficient skill acquisition assessed by a teacher

9. ADDITIONAL INFORMATION

Before the first meeting students should check on the website of Department of Biophysics, Physiology and Pathophysiology which group they belong to and what is the order of seminars/experiments in that group (see “Division into Groups” and “Schedule”). If the sequence is changed this fact will be announced on the website.

Students belong to particular groups according to the division provided by the Dean’s Office (it is not a matter of free choice). Students can change their groups only at the beginning of the course in justified cases.

Prior to the laboratory activities, students should read and understand the relevant instructions available on the e-learning platform. At the beginning of laboratory class students can expect an introduction by the teacher. This will be followed by an experiment / (demonstration). Finally, students will receive a form of an experiment report with the instructions to be followed and the questions to be answered. The report should be signed by a student. The form should be returned to the teacher before the end of the meeting. Students are assessed on basis of the results of their reports. The results should be available to students on the e-learning platform the following week.

Students' achievements are graded based on the final written test results covering all material from lectures, seminars and practical classes. The test will be composed of 60 questions. To be admitted to the final test students are obliged to fulfil the following conditions:

- attend all seminars and practical classes,
- pass all of the quizzes on the e–learning platform (after each lecture and seminar students should complete a short quiz; to pass the quiz, student has to answer correctly at least 60 % of the questions),
- submit 5 experimental reports and collect at least 15 points (one experimental report would be assessed for maximum 5 points).

To pass the final test, the student has to answer correctly at least 60% of the questions.

Rules of grading:

grade	criteria
2.0 (failed)	0-35 correct answers
3.0 (satisfactory)	36-40 correct answers
3.5 (rather good)	41-45 correct answers
4.0 (good)	46-50 correct answers
4.5 (more than good)	51-55 correct answers
5.0 (very good)	56-60 correct answers

Students who fail the test may retake it. According to Study Regulations of the Medical University of Warsaw there is only one re-test. However, in the event of failure to obtain a credit in the course on the first and second attempts the student may submit an application to the Dean within 7 days from the date of crediting for additional test.

All absences must be excused (e.g., sick leave) and made up with another group of students. The exact date should be agreed with the course coordinator. Only timetabled dates are available. In a situation where a student was absent but provided a medical certificate and could not make up the missed class because it was the last class related to the topic, the student may agree with the teacher another form of making up the absence. The teacher may have the student prepare a written paper on the given topic and then check the student's knowledge orally. The teacher may also require to take an additional written test on a given topic (60% of correct answers are required to pass the test).

If in doubt or if problems arise, please contact the course coordinator: piotr.jelen@wum.edu.pl

Every Wednesday after the last practical class, one of the teachers will be on duty for 30 minutes (16:30-17:00) to help students with ongoing problems.

The further detailed information for students will be available on the website of the Department of Biophysics, Physiology and Pathophysiology.

ATTENTION

The final 10 minutes of the last class of the block/semester/year should be allotted for students to fill out the Survey of Evaluation of Classes and Academic Teachers

Clinical Informatics and Biostatistics

1. IMPRINT	
Academic Year	2025/2026
Department	Faculty of Medicine
Field of study	Medicine
Main scientific discipline	Medical science
Study Profile	General academic

Level of studies	Uniform MSc
Form of studies	Full time studies
Type of module / course	Obligatory
Form of verification of learning outcomes	Credit
Educational Unit	Department of Medical Informatics and Telemedicine 00-581 Warszawa, Litewska 14/16 phone (+48) 22 116 92 44 e-mail: zimt@wum.edu.pl
Head of Educational Unit	Andrzej Cacko, MD, PhD
Course coordinator	Joanna Michalik, MD, e-mail: joanna.michalik@wum.edu.pl
Person responsible for syllabus	Joanna Michalik, MD, e-mail: joanna.michalik@wum.edu.pl
Teachers	Andrzej Cacko, MD, PhD; andrzej.cacko@wum.edu.pl Joanna Michalik, MD; joanna.michalik@wum.edu.pl Krzysztof Krasuski, M.Sc.; krzysztof.krasuski@wum.edu.pl Jakub Kosma Rokicki, MD; jakub.rokicki@wum.edu.pl Irena Sergiej-Monkiewicz, MD; Emanuel Tataj, M.Sc.; emanuel.tataj@wum.edu.pl

2. BASIC INFORMATION

Year and semester of studies	I year, 1 and 2 semester	**Number of ECTS credits**	2.00

FORMS OF CLASSES **Contacting hours with academic teacher**	**Number of hours**	**ECTS credits calculation**
Lecture (L)	5 (5 e-learning)	0,20
Seminar (S)	6 (6 e-learning)	0,24
Classes (C)	24	0,96
e-learning (e-L)		
Practical classes (PC)		
Work placement (WP)		
Unassisted student's work		

Preparation for classes and completions	15	0,60

3. COURSE OBJECTIVES	
O1	During the course, the student learns the basics of biostatistics, databases, including bibliography, applications enabling scientific research and sample programmes useful in professional practice.
O2	The aim of the classes is also to present basic information on new specialisations and medical faculties: telemedicine, medical and clinical computer science, e-Health, mHealth and virtual reality.
O3	Student will develop practical skills in data processing and analysis.

4. STANDARDS OF LEARNING – DETAILED DESCRIPTION OF EFFECTS OF LEARNING

Code and number of effect of learning in accordance with standards of learning	**Effects in the field of:** *(in accordance with appendix to the Regulation of Minister of Science and Higher education from 29th of September 2023)*
Knowledge – Graduate* knows and understands:	
B.W23	basic IT and biostatistical tools used in medicine
B.W24	basic methods of statistical analysis used in population and diagnostic studies
B.W25	the potential of modern telemedicine as a tool to assist the doctor
B.W26	principles of research for the advancement of medicine
Skills– Graduate* is able to:	
B.U8	use medical databases and correctly interpret the information they contain to solve problems in basic and clinical sciences
B.U9	select an appropriate statistical test, carry out basic statistical analyses and use appropriate methods to present the results
B.U10	classify scientific research methodology, including distinguishing between experimental and observational studies with their sub-types, ranking them according to the reliability of the results provided and correctly assessing the strength of scientific evidence
B.U11	plan and carry out scientific research and interpret the results and formulate conclusions

** In appendix to the Regulation of Minister of Science and Higher education from 29th of September 2023 „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	process of developing new specialisations in the field of the academic discipline – medical sciences and achievements of leading representatives of Polish and world medicine

K2	fundamentals of evidence-based medicine
K3	methods of health assessment and the classification systems of diseases and medical procedures
Skills– Graduate is able to:	
S1	critically analyse medical literature, including English literature, and draw conclusions
Social Competencies – Graduate is ready for:	
SC1	keeping medical privilege and patients' rights
SC2	the use of objective data sources

6. CLASSES

Form of class	Class contents	Effects of Learning
Lectures	**The module: Clinical Informatics and Telemedicine** L1. – Lecture 1 – Telemedicine - legal and practical background. Asynchronous e-learning, eWUM platform, specified weeks	B.W25., K1., K2., K3, SC1, SC2
	L2. – Lecture 2 – Electronic Health Records. Rules of entering and storing data. Providing access to medical records and personal data protection. Asynchronous e-learning, eWUM platform, specified weeks	B.W25., K1., K2., K3, SC1, SC2
	L3. – Lecture 3 – Selection of IT tools in the physician's professional practice. Medical databases. Asynchronous e-learning, eWUM platform, specified weeks	B.W25., K1., K2., K3, SC1, SC2
	L4. – Lecture 4 – Decision Support Systems. Asynchronous e-learning, eWUM platform, specified weeks	B.W25., K1., K2.
Classes	C1. – Class 1 – Medical Internet. Online bibliographic databases - medical information research and methodology for evaluating the reliability of information. Evidence-based medicine. Onsite class	B.W23., B.W24., B.W26., B.U8., B.U10., B.U11., K2., K3, S1, SC1, SC2
	C2. – Class 2 – Medical imaging - DICOM characteristics. Software for analysing and processing medical images. Fundamentals of image processing - discussion of basic formats, compression methods and their properties. Image data in medicine – examples. Onsite class	B.W23., B.U11., W1., S1, SC1, SC2
	C3. – Class 3 – mHealth, eHealth. New medical technologies. Telemedicine as a solution of health care problems. Examples of practical implementations. Virtual Patient. Examples of systems and applications for medical simulation and BLS learning. Onsite class	B.W23., B.W25., B.U8., K1., W3, S1, SC1, SC2
	C4. – Class 4 Practical exercises using a telemedicine platform. Examples of telemedicine solutions. Basics of maintaining, storage and sharing of medical records and personal data protection. Onsite class	B.W23., B.W25., B.U8., W1., W3, U1, K1, K2
	C5. – Class 5 – The practical use of AI and Large Language Models for students and medical professionals. ChatGPT: practical applications and limitations in daily work. Rules for building queries: Outline and	B.W23., B.W25., B.U8., W1., W3, U1, K1, K2

	present results. ChatGPT used as an assistant in information retrieval and data analysis.	
Lectures	**Module Biostatistics in Clinical Practice.** L5. – Lecture 5 – Introduction to biostatistics. Evaluation of the Population Health. Analysis of selected indicators and data from WHO databases. Asynchronous e-learning, eWUM platform, specified weeks	B.W23., B.W24., B.W26., B.U8., B.U9., B.U10., B.U11., K2., K3, S1, SC1, SC2
Seminars	S1. – Seminar 1 – Introduction to biostatistics. Research methodology - statistical methods. Planning a scientific research - an algorithm of investigation. Basic terms and statistical measurements. Asynchronous e-learning, eWUM platform, specified weeks	B.W23., B.W24., B.W26., B.U8., B.U9., B.U10., B.U11., K2., K3, S1, SC1, SC2
	S2. – Seminar 2 – Introduction to biostatistics. Review of chosen statistical tests - selection of test according to the type of variables. Descriptive analysis and statistical inference. Interpretation of statistical analysis results. Selected techniques of statistical analysis. Asynchronous e-learning, eWUM platform, specified weeks	B.W23., B.W24., B.W26., B.U8., B.U9., B.U10., B.U11., K2., K3, S1, SC1, SC2
Classes	C6. – Class 6 – Database design. Preparation and processing of data for statistical calculations. Data readability. Usage of a spreadsheet as a simple medical database, overview of program functions. Onsite class	B.W23., B.W24., B.W26., B.U8., B.U9., B.U10., B.U11., K2., K3, S1, SC1, SC2
	C7. – Class 7 – Descriptive statistics. Distribution of a variable. Practical exercises on the selected samples. Introduction to the software for statistical analysis planning and data visualisation. Hypothesis testing – part 1. Use of parametric and non-parametric tests. Exercises on sample clinical data. Onsite class	B.W23., B.W24., B.W26., B.U8., B.U9., B.U10., B.U11., K2., K3, S1, SC1, SC2
	C8. – Class8 – Statistical analysis software - practical classes. Hypothesis testing – part 2. Use of parametric and non-parametric tests. Exercises on sample clinical data. Regression analysis. Exercises on sample clinical data. Overview of selected publications. Onsite class	B.W23., B.W24., B.W26., B.U8., B.U9., B.U10., B.U11., K2., K3, S1, SC1, SC2
	E-test (MCQ) – questions on the material of lectures and classes. **The electronic test is conducted during the last class.**	B.W23., B.W24., B.W25., B.W26., B.U8., B.U9., B.U10., B.U11., K1, K2, K3, S1, SC1, SC2

7. LITERATURE

Obligatory

1. Lectures and educational materials prepared on WUM e-learning Platform.

Supplementary

1. Clinical Informatics Study Guide Text and Review. John T. Finnell, Editor, Brian E. Dixon, Editor, Springer 2016.
2. Fundamentals of Clinical Trials, 4e, Lawrence M. Friedman, Curt D. Furberg, David L. DeMets, Springer 2010
3. Digital Imaging and Communications in Medicine (DICOM), Oleg S. Pianykh, Springer 2012
4. Epidemiology and Biostatistics, Bryan Kestenbaum, Springer 2009

8. VERIFYING THE EFFECT OF LEARNING

Code of the course effect of learning	Ways of verifying the effect of learning	Completion criterion
B.W23., B.W24., B.W25., B.W26., B.U8., B.U9., B.U10., B.U11., K1, K2, K3, S1, SC1, SC2	Lecture completion: completion of e-learning activities by the specified deadline.	To pass the e-modules - obtaining at least 51% of the points.
B.W23., B.W24., B.W25., B.W26., B.U8., B.U9., B.U10., B.U11., K1, K2, K3, S1, SC1, SC2	Completion of classes with teacher: activity, fulfilment of exercises.	Monitoring of the exercises by the teacher. The assistant gives a final evaluation of all the classes.
B.W23., B.W24., B.W25., B.W26., B.U8., B.U9., B.U10., B.U11., K1, K2, K3, S1, SC1, SC2	Course completion: e-test: lectures and classes material, 50 questions, open questions and MSQ.	**Grade ranges for the electronic test:** 2.0 (ndst) up to 51% of points 3.0 (dst) 51.1%-60% points 3.5 (ddb) 60.1%-70% of points 4.0 (db) 70.1%-80% of points 4.5 (pdb) 80.1%-90% of points 5.0 (bdb) above 90% of points **The final course grade is the average of the class grades and the final test.**

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)*

The subject is divided into two modules: Clinical Informatics and Telemedicine & Biostatistics in Clinical Practice. The learning contents are taught in the form of blended learning in lectures, seminars and practical - exercises with an assistant using a computer or a tablet. Clinical data collected in the Department during statistical analyses and examples of medical images are used in the course. Materials, systems and applications were developed in the WUM projects AID
and Time2MUW projects.
Course begins with classes conducted by assistants at the Department of Medical Informatics and Telemedicine (Litewska 16, 3rd floor). Dates of lectures and classes for particular groups are given in the timetable and the course schedule in the eWUM Platform. During the first class, students will receive detailed information on the e-course.

To access the eWUM Platform (e-learning.wum.edu.pl/en), students log in as for the SSL-WUM service:
Please enter your ID (s0+ album number): s0XXXXX and enter the same password used for the SSL-WUM service.
We kindly ask each student to check before class if they can log in to the eWUM Platform. In case of any problems, please get in touch with the WUM IT Department (it.wum.edu.pl).

The electronic test is conducted during the last class at the Department. It is possible to take two attempts at the final test. The second attempt date should be agreed with the course tutor in the given group.

The teaching supervisor: Joanna Michalik, MD; joanna.michalik@wum.edu.pl

Course Regulations:
1) Classes conducted by the Department of Medical Informatics and Telemedicine in the first or second semester of study have the form of lectures, seminars and exercises. All classes are obligatory, except for optional classes.
2) The course shall be completed following the scheme in the syllabus.
3) A student assigned to a study group does classes with that group within the course, which means it is impossible to change the group during a semester or between semesters.

4) Students are entitled to one excused or unexcused absence per course cycle. A greater number of absences will fail to pass the course. Exercises and seminars missed for any reason (excused or unexcused) must be made up/passed within the time limit and in the form specified by the teaching tutor.
5) If a student cannot attend classes, he/she should send an e-mail to zimt@wum.edu.pl requesting to excuse for the absence. A student is obliged to send the request at least 24 hours before the start of classes or no later than three [3] days after the date on which the circumstances causing absence in classes occurred. Failure to send the application within the specified time limit results in the considering absence as unexcused.
6) A doctor's or dean's certificate justifying an absence is delivered by the student to the Department's Office during the subsequent full-time classes, but no later than within seven [7] working days of the certificate's issuance.
7) Late for classes exceeding 15 minutes is treated as an absence.
8) Applications for re-grades and credits are accepted during the first two weeks of the semester. Applications should include the course syllabus in which the credit or grade is to be transcribed.
9) Any issues not covered in the above regulations are decided by the teaching supervisor in consultation with the head of the unit.

Forms of making up classes: After consulting with the teaching tutor, classes should be made up with another student group. Those unable to make up their attendance with another group will participate in designated workshops, which must be completed within the specified deadline.

ATTENTION

The final 10 minutes of the last class of the block/semester/year should be allotted for students to fill out the Survey of Evaluation of Classes and Academic Teachers

History of Medicine

1. IMPRINT

Academic Year	2025/2026
Department	Faculty of Medicine
Field of study	Medicine
Main scientific discipline	Medical sciences
Study Profile	General academic
Level of studies	Uniform Msc

Form of studies	Full time
Type of module / course	Obligatory
Form of verification of learning outcomes	Completion
Educational Unit / Educational Units	Department of Medical Ethics and History of Medicine 00-581 Warsaw 14a Litewska St. tel. +48 22 116 92 34 e-mail: zaklad-bioetyki@wum.edu.pl
Head of Educational Unit / Heads of Educational Units	Prof. Tomasz Pasierski, MD, PhD
Course coordinator	Ewa Skrzypek, MD, PhD ewa.skrzypek@wum.edu.pl
Person responsible for syllabus	Ewa Skrzypek, MD, PhD ewa.skrzypek@wum.edu.pl
Teachers	Ewa Skrzypek, MD, PhD ewa.skrzypek@wum.edu.pl

2. BASIC INFORMATION

Year and semester of studies	1st year, 2nd semester	**Number of ECTS credits**	2.00

FORMS OF CLASSES **Contacting hours with academic teacher**	**Number of hours**	**ECTS credits calculation**
Lecture (L)	35	1.4
Seminar (S)		
Classes (C)		
e-learning (e-L)		
Practical classes (PC)		
Work placement (WP)		
Unassisted student's work		
Preparation for classes and completions	15	0.6

3. COURSE OBJECTIVES

O1	Acquaintance with the development of medical sciences in the world and in Poland throughout history.
O2	Acquaintance with major medical discoveries and outstanding people in the history of medicine.
O3	Acquaintance with the history of selected medical equipment and hospital systems in Poland and in the world.
O4	Acquaintance with the history of selected diseases, *most famous patients* included.
O5	Presentation of the most important aspects of the history of medicine teaching in Poland and in the world.

4. STANDARDS OF LEARNING – DETAILED DESCRIPTION OF EFFECTS OF LEARNING

Code and number of the effect of learning in accordance with standards of learning	**Effects in the field of:** *(in accordance with appendix to the Regulation of Minister of Science and Higher education from 29th of September 2023)*
Knowledge – Graduate* knows and understands:	
D.W15.	the concept of humanism in medicine and the main concepts, theories and ethical principles that serve as a general framework for properly interpreting and analysing moral-medical issues
D.W18.	history of medicine, features of modern medicine and the most important discoveries and achievements of the leading representatives of Polish and world medicine
Skills– Graduate* is able to:	
G.S1	-

5. ADDITIONAL EFFECTS OF LEARNING

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

6. CLASSES

Form of class	Class contents	Effects of Learning
Lectures	L1 – Lecture 1 – Organization of classes. Why medical history?	D.W15; D.W18
	L2 – Lecture 2 – Hippocrates – father of medicine	D.W15; D.W18
	L3 – Lecture 3 – Outline of the history of anatomy and pathological anatomy / / pathomorphology	D.W15; D.W18
	L3 – Lecture 4 – Outline of the history of histology and physiology	D.W15; D.W18
	L5 – Lecture 5 – Outline of the history of microbiology, immunology and genetics	D.W15; D.W18
	L6 – Lecture 6 – Outline of the history of surgery	D.W15; D.W18
	L7 – Lecture 7 – Outline of the history of internal medicine	D.W15; D.W18
	L8 – Lecture 8 – Outline of the history of gynaecology and obstetrics	D.W15; D.W18
	L9 – Lecture 9 – Outline of the history of paediatrics	D.W15; D.W18
	L10 – Lecture 10 – Outline of the history of neurology, neurosurgery and psychiatry	D.W15; D.W18
	L11 – Lecture 11 – Who name it? The few medical eponyms among Polish women	D.W15; D.W18
	L12 – Lecture 12 – Honorary doctors of Medical University of Warsaw and their passions	D.W15; D.W18
	L13 – Lecture 13 – Pioneers in National and World Medicine	D.W15; D.W18
	L14 – Lecture 14 – Chronology of medical history. Summary of the course	D.W15; D.W18
	L15 – Lecture 15 - Final test	D.W15; D.W18

7. LITERATURE

Obligatory

1. All obligatory reading materials will be provided by the lecturer in .pdf files

Supplementary

2. Ackerknecht E. H.: *A Short History of Medicine,* The Johns Hopkins University Press, Baltimore and London 1982.
3. Bostridge M.: *Florence Nightingale. The Women and Her Legend,* Penguin Books 2008.
4. Brown J.: *Influenza. The hundred-year hunt to cure the deadliest disease in history,* Touchstone 2018.
5. Bynum W., Bynum H. (eds.): *Great Discoveries in Medicine,* Thames & Hudson, London 2011.
6. Finn G. M. (ed.): *30-second medicine. The 50 crucial milestones, treatments and technologies in the history of health, each explained in half a minute,* Ivy Press, London 2017.
7. Hager Th.: *Ten Drugs. How Plants, Powders and Pills Have Shaped the History of Medicine,* Abrams Press, New York 2019.
8. Harper P. S.: *A Short History of Medical Genetics,* Oxford University Press, Oxford 2008.
9. Jauhar S.: *Heart. A History,* Oneworld, London 2019.

10. Jewell H.: *100 Nasty Women of History,* Hodder Stoughton, London 2017.
11. Lieberman J. A., Ogas O.: *Shrinks. The Untold History of Psychiatry,* Weidenfeld Nicolson, London 2016.
12. Martin S.: *A Short History of Disease. Plagues, Poxes and Civilisations,* Pocket Essentials, Gloucester 2015.
13. Mukherjee S.: *The Emperor of All Maladies. A Biography of Cancer,* Fourth Estate, London 2011.
14. Mukherjee S.: *The Gene. An Intimate History,* Vintage, London 2017.
15. Nuland Sh. B.: *Doctors. The Illustrated History of Medical Pioneers,* New York 2008.
16. Oldstone M. B. A.: *Viruses, Plagues and History. Past, Present and Future,* Oxford University Press, Oxford 2010.
17. Paul G.: *An Illustrated History of Medicine. A Medical Exploration in Fifty Objects,* Quad Books 2016.
18. Porter R. (ed.): *Cambridge Illustrated History. Medicine,* Cambridge University Press, Cambridge 2001.
19. Ribatti D.: *Milestones in Immunology. Based on Collected Papers,* Academic Press, Elsevier, London 2017.
20. Siemionow M.: *Face to Face. A Short History of Face Transplantation,* Springer, Chicago 2019.
21. Skrzypek E.: *Portraits of the Honorary Doctors,* Medical University of Warsaw, Warsaw 2016.
22. Snow S. J.: *Blessed Days of Anaesthesia. How Anaesthetics Changed the World?,* Oxford University Press, Oxford 2009.
23. Spearing S.: *A History of Women in Medicine. Cunning Women, Physicians, Witches,* Pen & Sword Books Ltd, Yorkshire – - Philadelphia 2019.
24. Strathern P.: *A Brief History of Medicine from Hippocrates to Gene Therapy,* Robinson, London 2005.
25. Wadman M.: *The Vaccine Race. How Scientists Used Human Cells to Combat Killer Viruses,* Black Swan, London 2018.
26. Youngson R., Schott I.: *A Brief History of Bad Medicine. True stories of weird medicine and dangerous doctors,* Robinson 2012.

8. VERIFYING THE EFFECT OF LEARNING

Code of the course effect of learning	Ways of verifying the effect of learning	Completion criterion
D.W15, D.W18	Continuous assessment in the course of classes; grade from the final test on the e-learning platform	**Form of receiving credit – COMPLETION FOR GRADE** Active participation in classes; attendance at lectures; passing the final test – - 20 single-choice questions **2.0 (failed)** – 0-10 pt **3.0 (satisfactory)** – 11-12 pt **3.5 (rather good)** – 13-14 pt **4.0 (good**) – 15-16 pt **4.5 (more than good)** – 17-18 pt **5.0 (very good)** – 19-20 pt

9. ADDITIONAL INFORMATION

1. Lectures are held according to the time-table provided by the Dean's Office.
2. Person responsible for didactics: Ewa Skrzypek, MD, PhD; e-mail: ewa.skrzypek@wum.edu.pl
3. Duty shifts are arranged, in case of need, after prior e-mail contact.
4. The use of mobile phones and other recording equipment is forbidden.
5. Students cannot be late for lectures.
6. **Students are obliged to attend all lectures**. In the case of any absence, even justified, Students are obliged to determine the way of making up for the absence with the lecturer.
7. **Three** or more absences exclude the possibility of getting a course credit.
8. A course credit is given on the basis of:
   a) lecture attendance,
   b) active participation in lectures,
   c) positive grade from the final test.

   In case of receiving an unsatisfactory grade, the Student has a right to a retake in the form determined by the coordinator

of the subject.

9. There is the possibility of slight modification of the program of classes.

ATTENTION

The final 10 minutes of the last class of the block/semester/year should be allotted for students to fill out the Survey of Eva

Medical Ethics with Elements of Philosophy

1. IMPRINT

Academic Year	2025/2026
Department	Faculty of Medicine
Field of study	Medicine
Main scientific discipline	Medical sciences

Study Profile	General academic
Level of studies	Uniform MSc
Form of studies	Full time studies
Type of module / course	Obligatory
Form of verification of learning outcomes	credit
Educational Unit	Department of Medical Ethics and History of Medicine 00-581 Warsaw 14a Litewska St. tel. +48 22 116 92 34 e-mail: zaklad-bioetyki@wum.edu.pl
Head of Educational Unit	Prof. dr hab. Tomasz Pasierski
Course coordinator	dr Agata Łukomska e-mail: agata.lukomska@uw.edu.pl
Person responsible for syllabus	dr Agata Łukomska e-mail: agata.lukomska@uw.edu.pl
Teachers	dr Agata Łukomska, e-mail: agata.lukomska@uw.edu.pl Prof. Joanna Górnicka-Kalinowska e-mail:joangornicka@poczta.onet.pl

2. BASIC INFORMATION

Year and semester of studies	I year, 1 (winter) semester	**Number of ECTS credits**	2.00

FORMS OF CLASSES **Contacting hours with academic teacher**	**Number of hours**	**ECTS credits calculation**
Lecture (L)	20	0,8

Seminar (S)	10	0,4
Classes (C)		
e-learning (e-L)		
Practical classes (PC)		
Work placement (WP)		
Unassisted student's work		
Preparation for classes and completions	20	0,8

3.	**COURSE OBJECTIVES**
O1	To acquaint the student with the philosophical basis of scientific medical knowledge
O2	To acquaint the student with the basics of physician ethics.
O3	To develop the basic skills necessary for independent analysis of ethical problems in medicine

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)*

Code and number of effect of learning in accordance with standards of learning	**Effects in the field of:***((in accordance with appendix to the Regulation of Minister of Science and Higher education from 29th of September 2023)*
Knowledge – Graduate* knows and understands:	
D.W2	concepts of health and illness, the influence of the social environment (family, work, social relations) and socio-cultural conditions (origin, social status, religion, nationality and ethnic group) on the patient's health;
D.W5	social attitudes towards illness, disability and old age and the specific impact of stereotypes, prejudice and discrimination;
D.W15	the concept of humanism in medicine and the main concepts, theories and ethical principles that serve as a general framework for properly interpreting and analysing moral-medical issues;
D.W16	patient rights and the concept of patient welfare;
D.W17	the philosophy of palliative care and its importance in the context of patient care at all stages of serious illness and death with dignity;
Skills– Graduate* is able to:	
D.U1	observe ethical models in professional activities, including planning and carrying out the therapeutic process in accordance with ethical values and the idea of humanism in medicine;

D.U2	recognise the ethical dimension of medical decisions and distinguish factual from normative aspects;
D.U3	respect patients' rights;
D.U7	develop and improve self-awareness, self-reflection and self-care, and reflect with others on their own way of communicating and behaving;
D.U9	describe and critically evaluate their own behaviour and communication, taking into account the possibility of alternative behaviour;

** 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	
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
L1 - lecture	Philosophy and its main subdisciplines. Knowledge and types of science. Inductive inference. Humanities. Basics of philosophy of science. Theories of truth.	D.W2, D.W5, D.W15, D.W16, D.W17 D.U1, D.U2, D.U3, D.U7, D.U9
L2 - lecture	Philosophical and methodological foundations of EBM. Ethics and medical professionalism	
L3 - lecture	Philosophical ethical theories.	
L4 - lecture	Ethical regulation in medicine. Justice in healthcare and patient's rights.	
L5 - lecture	Physician-patient relationship and informed consent. Patient's decisional competency	
L6 - lecture	Physician's professional autonomy. Medical paternalism. Truthfulness and confidentiality.	
S1 - seminar	Medical professionalism	
S2 - seminar	Informed consent to medical services. Patient's autonomy and decisional competency.	

S3 - seminar	Physician's professional autonomy. Medical confidentiality.	
S4 - seminar	Patient's privacy. Ethics of the beginnings of life.	
S5 - seminar	Conflict of interest in healthcare.	
S6 - seminar	Ethical problems in pediatrics. The ethics of the end of life issues.	

7. LITERATURE

Obligatory

T. L. Beauchamp, J. F. Childress, Principles of Biomedical Ethics, Oxford University Press 1994 (fourth edition), chap. 3-7.

Supplementary

Scholarly journal articles selected for particular seminars. List of readings will be provided during first seminar.

8. VERIFYING THE EFFECT OF LEARNING

Code of the course effect of learning	Ways of verifying the effect of learning	Completion criterion
D.W2, D.W5, D.W15, D.W16, D.W17 D.U1, D.U2, D.U3, D.U7, D.U9	Multiple choice test.	60% correct answers
	Correct analysis of a medical ethical case during class presentation.	Acquisition of the skill at an acceptable level.

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)*

Attendance at all classes is mandatory. Any excused absence must be made up in a manner agreed upon with the instructor.

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	
Academic year	2025/2026
Department	Faculty of Medicine
Field of study	Medicine
Main scientific discipline	Medical sciences
Study profile	General academic
Level of studies	Uniform MSc
Form of studies	Full time studies
Type of module / course	Obligatory
Form of verification of learning outcomes	Credit
Educational Unit	Medical Communication Department of the Medical University of Warsaw Litewska Street 16, room 207, 00-575 Warszawa, tel. 22 116 92 270 e-mail: skm@wum.edu.pl www.skm.wum.edu.pl
Head of Educational Unit	**Antonina Doroszewska, PhD**

	Head of the Department of Medical Communication e-mail: antonina.doroszewska@wum.edu.pl
Course coordinator	Adrianna Beczek, MD, MA e-mail: adrianna.beczek@wum.edu.pl
Person responsible for the syllabus	Adrianna Beczek, MD, MA e-mail: adrianna.beczek@wum.edu.pl
Teachers	Adrianna Beczek, MD, MA e-mail: adrianna.beczek@wum.edu.pl Paulina Kumięga, MD e-mail: paulina.kumiega@wum.edu.pl

2. BASIC INFORMATION

Year and semester of studies	year I, semester 2.	**Number of ECTS points**	1

FORM OF CONDUCTING CLASSES **Contact hours with an academic teacher**	**number of hours**	**ECTS point calculation**
lecture (W)	4	0.2
seminar (S)	-	-
classes (C)	-	-
e-learning (eL)	14	0.6
practical classes (ZP)	-	-
Work placement (PZ)	-	-
Student's independent work		
Preparation for classes and tests	6	0.2

3. COURSE OBJECTIVES

O1	Understanding the factors influencing the doctor's contact with patients and their relatives.
O2	Learning about interdisciplinary sources of medical communication.
O3	Understanding the patient's perspective in the context of medical communication.

4. EDUCATION STANDARD – DETAILED LEARNING OUTCOMES

Code and number of the effect of learning in accordance with standards of learning	**Effects in the field of:** *(in accordance with appendix to the Regulation of Minister of Science and Higher education from 29th of September 2023)*

Knowledge – The graduate* knows and understands:	
D.W7	the specificity and role of verbal (conscious message construction) and non-verbal communication
Skills – Graduate* is able to: -	

** The annexes to the Regulation of the Minister of Science and Higher Education of September 29th, 2023 mention a "graduate", not a student*

5. ADDITIONAL EFFECTS OF LEARNING

Number of effect of learning	*(optional field)* **Effects in the fields of:**
Knowledge – The graduate knows and understands:	
K1	Knows and understands the basic types of barriers and errors in communication.
K2	Knows interdisciplinary sources of medical communication and their importance in medical practice.
K3	Understands the impact of one's own emotions on communication with patients and their loved ones.
Skills – The graduate is able to:	
Social competences – The graduate is ready to:	
SC1	Establishing and maintaining respectful contact with the patient, considering ideological and cultural differences, and being guided by his or her best interests.

6. CLASSES

Form of class	Class content	Learning outcomes
Lectures in the form of e-learning	Introduction – what is medical communication? The most common mistakes in communication. Communication barriers. Techniques for recognizing your own emotions. Self-regulation. Sociological aspects of communication in medical practice. Patient-centered communication and the patient's perspective. Special communication situations – children, elderly people, people with hearing impairment. Philosophy of the doctor-patient encounter.	D.W7, K1, K2, K3, SC1

7. Literature

Obligatory

1. Materials on the e-learning platform.
2. Bodys-Cupak, I., Grochowska, A., Zalewska-Puchała, J. & Majda, A., 2019. Stress and coping strategies of medical students during their first clinical practice – a pilot study. Medical Studies / Studia Medyczne, 35(4), pp. 294–303.

Supplementary

1. Stewart, John, editor. Bridges Not Walls: A Book About Interpersonal Communication. 11th ed., McGraw-Hill Education, 2011.
2. Wulff HR, Pedersen SA, Rosenberg R. Philosophy of Medicine — An Introduction. 2. edition. London: Blackwell Scientific Publications.

8. WAYS TO VERIFY LEARNING OUTCOMES

Symbol of the subject learning outcome	Ways to verify the learning effect	Passing criteria
D.W7, K1-K3	*Going through modules in the e-learning platform. Completion of tasks included in the e-learning platform.*	**Registered** activity on the e-learning platform: at least 80%. Scoring at least 80% passing grades in the tasks.
K1-K3, SC1	*Submission of responses to open questions (portfolio).*	Compulsory submission of 'portfolio'.
D.W7	*Solving the final test (single-choice test, 10 questions).*	At least 80%.

9. ADDITIONAL INFORMATION

The deadline for completing all modules and tasks in the e-learning course is March 29, 2026, at 23.59. The second passing date will be determined after the first, and will require additional activities.

We invite people interested in participating in scientific groups. The Medical Education Student Learning Group operates at the Medical Communication Department: the club's supervisor - Dr. Antonina Doroszewska (antonina.doroszewska@wum.edu.pl); SKN website –
http://www.facebook.com/sknedumedwum.

Polish language

1. IMPRINT	
Academic Year	2025/2026
Department	Faculty of Medicine
Field of study	Medicine
Main scientific discipline	Medical sciences
Study Profile	General academic
Level of studies	Uniform MSc
Form of studies	Full time studies
Type of module / course	Obligatory
Form of verification of learning outcomes	Completion
Educational Unit / Educational Units	Foreign Language Department The Didactic Center, ul. Trojdena 2a, 02-109 Warsaw sjosekretariat@wum.edu.pl, tel. 22 5720863 www.sjo.wum.edu.pl/
Head of Educational Unit / Heads of Educational Units	Maciej Ganczar, PhD, Professor at MUW maciej.ganczar@wum.edu.pl

Course coordinator	Anna Maczkowska, MA anna.maczkowska@wum.edu.pl
Person responsible for syllabus	Anna Maczkowska, MA anna.maczkowska@wum.edu.pl
Teachers	Maciej Ganczar, PhD, Professor at MUW

2. BASIC INFORMATION

Year and semester of studies	1st, 1st and 2nd semester	**Number of ECTS credits**	5.00

FORMS OF CLASSES **Contacting hours with academic teacher**	**Number of hours**	**ECTS credits calculation**
Lecture (L)		
Seminar (S)		
Classes (C)	70	3
e-learning (e-L)		
Practical classes (PC)		
Work placement (WP)		
Unassisted student's work		
Preparation for classes and completions	160	2

3. COURSE OBJECTIVES

O1	The aim of the 1st year Polish language course is to introduce Polish letters, sounds and basic language structures as well as vocabulary that will provide the students with foundations on which the 2nd year basic medical Polish language competencies can be built.

4. STANDARDS OF LEARNING – DETAILED DESCRIPTION OF EFFECTS OF LEARNING

Code and number of the effect of learning in accordance with standards of learning	**Effects in the field of:** *(in accordance with appendix to the Regulation of Minister of Education of 29 September 2023)*
Knowledge – Graduate* knows and understands:	
D.W7.	the specificity and role of verbal (conscious message construction) and non-verbal communication

Skills– Graduate* is able to:	
D.U6.	communicate with the patient in one foreign language at B2+ level of the Common European Framework of Reference for Languages

** In appendix to the Regulation of Minister of Education of 29 September 2023 „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	
Skills– Graduate is able to:	
S1	recognise and write printed and handwritten letters
S2	recognise and pronounce Polish sounds
S3	inform and inquire about name, age, nationality, marital status, family members, occupation, place of residence, living conditions
S4	describe and inquire about daily activities and past events
S5	use selected expressions referring to time, place, and quantity
Social Competencies – Graduate is ready for:	
SC1	continually broadening their knowledge

6. CLASSES

Form of class	**Class contents**	**Effects of Learning**
C1	Discussing the syllabus (the course content, learning outcomes and the methods of their verification; rules and regulations; credit receiving criteria)	D.U6
C2	The Polish alphabet and sounds • Some useful phrases.	D.W7., D.U.6, S1, S2, S3, S4, S5
C3/4	Greetings and introductions • Cardinal numbers: 1-20 • Nouns: gender; the nominative singular • The demonstrative pronoun *to + jest* • The instrumental singular. Questions: *kto? co?*, *czy?* • *Kim pan/pani jest?* Pronunciation practice.	D.W7., D.U6, S1, S2, S3, S4, S5
C5/6	Personal pronouns: the nominative singular • The formal and informal *you* • The verb *być*: present tense singular • Pronunciation practice	D.W7., D.U.6, S1, S2, S3, S4, S5
C7/8	Adjectives: gender; the nominative singular • Questions: *jaki, -a, -e* • The pronouns *ten, ta, to* • Cardinal numbers: 20-100 • Pronunciation practice.	D.W7., D.U6, S1, S2, S3, S4, S5
C9/10	Possessive pronouns: the nominative singular • Questions: czyj/a/e ? • Nouns and adjectives: the instrumental singular • Jobs • Nationalities • Countries • Questions: kim?, skąd?	D.W7., D.U6, S1, S2, S3, S4, S5

C11/12	Nouns and adjectives: the accusative singular. *Proszę*.... • Cardinal numbers: 100-1000 • Pronunciation practice. • The prepositions w and na to describe location • Questions: gdzie?	D.W7., D.U6., S1, S2, S3, S4, S5
C13/14	Selected verbs followed by the accusative • Ordinal numbers: 1-12 • Telling the time • Questions: kogo?, co?, która (godzina)?, o której (godzinie)? • Pronunciation practice	D.W7., D.U6., S1, S2, S3, S4, S5
C15/16	Progress test	D.W7., D.U6., S1, S2, S3, S4, S5
C17/18	Nouns and adjectives: the genitive singular and plural • Negative sentences • Questions: kogo?, czego? • Pronunciation practice	D.W7., D.U6., S1, S2, S3, S4, S5
C19/20	Verbs of motion: chodzić, iść, jechać • Means of transport • The prepositions do and na to describe direction • Questions: czym? • Pronunciation practice	D.W7., D.U6., S1, S2, S3, S4, S5
C21/22	Adverbs of frequency (e.g. zawsze, często, czasem) • The times of day (e.g. rano, wieczorem, w nocy) • Description of daily activities • Pronunciation practice	D.W7., D.U6,. S1, S2, S3, S4, S5
C23/24	. Days of the week • The school timetable • Pronunciation practice • The past tense singular • Expressions of time: wczoraj, w zeszłym tygodniu/miesiącu/roku, … temu • Pronunciation practice	D.W7., D.U6., S1, S2, S3, S4, S5
C25/26	The past tense •Family and hobbies • Living conditions • Pronunciation practice	D.W7., D.U6., S1, S2, S3, S4, S5
C 27/28	Uses of the genitive with numbers, containers, adverbs of quantity • Time phrases with the preposition od (e.g. od dwóch godzin, od pięciu miesięcy, od roku) • Questions: od jak dawna/od kiedy? • Pronunciation practice • Pronunciation practice	D.W7., D.U6., S1, S2, S3, S4, S5
C 29/30	The verbs musieć and móc (the present tense) • Expressions of time: co tydzień/dwa miesiące/pięć lat, etc.; raz, dwa, etc. razy dziennie, w tygodniu/miesiącu/roku • Pronunciation practice	D.W7., D.U6., S1, S2, S3, S4, S5
C31/32	Course test revision	D.W7., D.U6., S1, S2, S3, S4, S5
C33/34	The course written test • Course oral test revision.	D.W7., D.U6., S1, S2, S3, S4, S5
C35	The course oral test.	D.W7., D.U6., S1, S2, S3, S4, S5

7. LITERATURE

Obligatory

The title of the textbook will be given at the first class meeting.

Supplementary

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.W7., D.U6	Written test. Oral test.	To successfully complete the 1st year Polish language course and obtain credit, a student is required to: • attend all classes (min. 13 out of 15 in a semester) A student who misses more than 2 classes per semester without a valid excuse will not be allowed to take the course tests and will not receive course credits. 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. 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. • come to classes punctually 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. • actively participate in each class • complete all the assignments by the due date • pass the intermediate progress tests during the winter and summer semester and the course written and oral tests (covering the coursework of both the winter and summer semesters) at the end of the summer semester A student who fails the course tests can attempt two retakes. The final course grade a student receives is the average (arithmetic mean) of the written and oral test grades (grades of 2-5), or a grade of 3 for passing a retake. A minimum score of 60% must be obtained on each (written and oral) test to pass the course. 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. A student who fails the second retake of the final test needs to repeat the course. Students who are 'independent users' of the Polish language (Level B2 as described in the Common European Framework) may be exempted from attending the first year Polish language course (and the second year Polish language course provided they achieve the required score) if they pass the B2 level examination organised by the University's Centre for Foreign Languages (Studium Języków Obcych) at the beginning of Year 1. Students interested in taking the exam should check with their class teacher for the exam date, time and location at the first class meeting. The scale of grades is as follows: 2.0 (failed) Below 60% 3.0 (satisfactory) 60-69% 3.5 (rather good) 70-79%

		4.0 (good) 4.5 (more than good) 5.0 (very good)	80-85% 86-90% 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

Propaedeutics of molecular biology

1. IMPRINT

Academic Year	2025/2026
Department	Faculty of Medicine
Field of study	Medicine
Main scientific discipline	Medical sciences
Study Profile	General academic
Level of studies	Uniform MSc
Form of studies	Full time studies
Type of module / course	Obligatory
Form of verification of learning outcomes	Credit
Educational Unit / Educational Units	Department of General Biology and Parasitology, 5 Chałubińskiego Str., 02-004 Warsaw, tel. +48 22 6212607; e-mail: biologia@wum.edu.pl

ATTENTION

The final 10 minutes of the last class of the block/semester/year should be allotted for students to fill out the Survey of Evaluation of Classes and Academic Teachers

Head of Educational Unit / Heads of Educational Units	Ph.D., Professor, Daniel Młocicki
Course coordinator	Ph.D., Associate Professor, Monika Dybicz, e-mail: monika.dybicz@wum.edu.pl
Person responsible for syllabus	Monika Dybicz, e-mail: monika.dybicz@wum.edu.pl
Teachers	Monika Dybicz, Aleksandra Sędzikowska

2. BASIC INFORMATION

Year and semester of studies	Year I, 1st (winter) semester	**Number of ECTS credits**	2.00

FORMS OF CLASSES **Contacting hours with academic teacher**	**Number of hours**	**ECTS credits calculation**
Lecture (L)		
Seminar (S)	5	0.2
Classes (C)	15	0.6
e-learning (e-L)		
Practical classes (PC)		
Work placement (WP)		
Unassisted student's work		
Preparation for classes and completions	30	1.2

3. COURSE OBJECTIVES

O1	The objective is to provide knowledge which enable medical students to have a broad view of molecular biology.
O2	The subject focuses on broad base of knowledge about the genome, molecular mechanisms of cell processes and expression of genetic information in humans.
O3	The performance of fundamental molecular techniques.

4. STANDARDS OF LEARNING – DETAILED DESCRIPTION OF EFFECTS OF LEARNING	
Code and number of the effect of learning in accordance with standards of learning	**Effects in the field of:** *(in accordance with appendix to the Regulation of Minister of Science and Higher education from 29th of September 2023)*
Knowledge – Graduate* knows and understands:	
B.W11	the function of nucleotides in the cell, the I- and II-strand structures of DNA and RNA and the structure of chromatin
B.W12	functions of the human genome, transcriptome and proteome and the methods used to study them, the processes of DNA replication, repair and recombination, transcription and translation and degradation of DNA, RNA and proteins, and the concepts of regulation of gene expression
B.W14	basic methods used in laboratory diagnostics, including protein and nucleic acid electrophoresis
B.W26	principles of research for the advancement of medicine.
C.W1	the normal human karyotype and the different types of sex determination;
Skills– Graduate* is able to:	
B.U8	use medical databases and correctly interpret the information they contain to solve problems in basic and clinical sciences;
B.U9	select an appropriate statistical test, carry out basic statistical analyses and use appropriate methods to present the results;
B.U11	plan and carry out scientific research and interpret the results and formulate conclusions
B.U12	use basic laboratory and molecular techniques
C.U3	read basic genetic test results, including karyotypes;

** In appendix to the Regulation of Minister of Science and Higher education from 29th of September 2023 „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	Fundamental molecular techniques.
K2	The principles of conducting scientific, observational and experimental research and disseminating their results.
Skills– Graduate is able to:	
S1	Plan own educational activity and constantly improve education to update knowledge.

S2	Interpret the basic results of molecular studies and critically assesses their results in correlation with the possibility of a genetic disease in a patient.
S3	Communicate with colleagues in the team and share knowledge.
Social Competencies – Graduate is ready for:	
SC1	Continuous improve education connected with the expansive molecular biology development.
SC2	Use of objective sources of information.
SC3	Formulation conclusions from own measurements or observations.

6. CLASSES

Form of class	Class contents	Effects of Learning
Seminars	1. Human genome structure and function. 2. DNA and RNA structure and function. 3. DNA replication. 4. Transcription and translation, DNA repair and recombination, gene expression regulation. 5. Mutagenesis.	B.W11, B.W12
Practical classes	1. Basic rules of laboratory work. DNA extraction. 2. Continuation of DNA extraction. 3. *In vitro* DNA amplification (PCR and modifications). 4. RFLP and other molecular techniques. 5. Electrophoresis. 6. GMO (Genetically Modified Organisms). 7. Analysis of gene mutations determining the development.	B.W11, B.W12, B.W14

7. LITERATURE

Obligatory

1. Workbook: Molecular Biology - materials for 1st year students of English Division Medicine. Monika Dybicz, Aleksandra Sędzikowska. Oficyna Wydawnicza WUM, Warszawa, 2020.
2. Molecular Biology. Third Edition. David P. Clark, Nanette J. Pazdernik, Michelle R. McGehee. Elsevier, 2019.

Supplementary

Molecular Biology of the Gene. Seventh Edition. James. D. Watson, Tania A. Baker, Stephen P. Bell, Alexander Gann, Michael Levine, Richard Losick. Cold Spring Harbor Laboratory Press, 2013.

8. VERIFYING THE EFFECT OF LEARNING

Code of the course effect of learning	Ways of verifying the effect of learning	Completion criterion
B.W11, B.W12, B.W14, B.U11, B.U12	Multiple Choice Questions test (20 questions)	Over 55% correct answers
B.W11, B.W12, B.W14, B.U11, B.U12	Completion of individual exercises based on the reports of the exercises in the workbook	Correct record of results obtained during exercises and their proper interpretation

9. Additional information

1) Students are required to attend all classes.
2) Attendance at all classes is obligatory, attendance should be on time. Absence from class is justified on the basis of a medical certificate or certificate of a random accident. Abandoned class should be done with another group or individually in exceptional situations after prior agreement with the person responsible for the subject (Ph.D. Monika Dybicz).
3) Classes start on time, being late is treated as an absence.
4) Students use the workbook "Molecular Biology - materials for 1st year students of English Division Medicine" during the practical classes. It is sent in pdf version to students before the beginning of the course.
5) Students should wear a lab coat and lab gloves.
6) 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 Dean.
7) There are three possible attempts to take test for completion of the course.

ATTENTION

The final 10 minutes of the last class of the block/semester/year should be allotted for students to fill out the Survey (

Propaedeutics of addiction medicine

1. Imprint

Academic Year	2025/2026
Department	Faculty of Medicine
Field of study	Medicine
Main scientific discipline	Medical sciences
Study Profile	General academic

Level of studies	Uniform MSc
Form of studies	Full time studies
Type of module / course	Obligatory
Form of verification of learning outcomes	Completion (Credit)
Educational Unit / Educational Units	II Department of Psychiatry, Medical University of Warsaw Prof. Andrzej Kokoszka, MD, PhD, 8 Kondratowicza St. (section G, 4 floor), phone 22 326 58 92, **!!!!!!Attention !!!!! seminars and classes room – building H 1-st floor Lecture's Room phone: 48 22 326-54-45 !!!!!!**
Head of Educational Unit / Heads of Educational Units	Prof dr hab Andrzej Kokoszka e-mail: andrzej.kokoszka@wum.edu.pl
Course coordinator	Marcin Obrębski, MD PhD e-mail: marcin.obrebski@wum.edu.pl
Person responsible for syllabus	Marcin Obrębski, MD PhD e-mail: marcin.obrebski@wum.edu.pl
Teachers	Joanna Mikuła MSc, Anna Kułakowska MSc, Sasza Rychlica MSc, Mikołaj Rejewski MSc. Marta Budziszewska MSc, Marcin Obrębski, MD PhD

2. BASIC INFORMATION

Year and semester of studies	First year/summer semester	**Number of ECTS credits**	1.00

FORMS OF CLASSES	**Number of hours**	**ECTS credits calculation**
Contacting hours with academic teacher		
Lecture (L)		
Seminar (S)	5	0,2
Classes (C)	10	0,4
e-learning (e-L)		
Practical classes (PC)		

Work placement (WP)		
Unassisted student's work		
Preparation for classes and completions	10	0,4

3.	**COURSE OBJECTIVES**
O1	To acquire general knowledge in the area of addiction, i.e. diagnosis, psychopathology, treatment
O2	To acquire competence in contact and intervention for addicted patients
O3	To acquire knowledge in the area of psychological mechanisms and problems in the family of addicted patient

4. **STANDARDS OF LEARNING – DETAILED DESCRIPTION OF EFFECTS OF LEARNING**

Code and number of effect of learning in accordance with standards of learning	**Effects in the field of:** *(in accordance with appendix to the Regulation of Minister of Science and Higher education from 29th of September 2023)*
Knowledge – Graduate* knows and understands:	
C.W36	symptoms of the most common acute poisonings with selected groups of drugs, alcohol and other psychoactive substances, fungi and heavy metals;
D.W12	problematic substance use and addiction and behavioural addictions, methods of brief intervention with problematic substance users, mechanisms of addiction and the goals and methods of treatment for addicts and effective prevention strategies, psychosomatic disorders affecting people in a close relationship with an addict and therapeutic approaches;
D.W13	forms of violence, including domestic violence, the social determinants of the various forms of violence and the role of the doctor in recognising it, and the rules for dealing with suspected cases of violence, including the "Blue Card" procedure;
D.W16	patient rights and the concept of patient welfare;
E.W18 p. 5	environmental and epidemiological conditions, causes, symptoms, principles of diagnosis and therapeutic management of the most common psychiatric diseases and their complications: 5) psychoactive substance use disorders;
Skills– Graduate* is able to:	
E.U11	identify symptoms of risky and harmful use of alcohol and problematic use of other psychoactive substances, symptoms of addiction to psychoactive substances and behavioral addictions, and propose appropriate therapeutic and medical procedures;
E.U26	make diagnostic and therapeutic decisions together with the patient (assess the patient's level of involvement, needs and possibilities in this regard, encourage the patient to take an active part in the decision-making process, discuss the advantages, disadvantages, expected results and consequences of the decision) and obtain informed consent patient;

E.U28	identify social determinants of health, indicators of anti-health and self-destructive behaviors and discuss them with the patient and make a note in the medical documentation;
E.U29	identify possible indicators of violence, including domestic violence, conduct an interview to verify whether there is a risk that the patient is experiencing violence, make a note in the medical documentation and initiate the "Blue Card" procedure;

** In appendix to the Regulation of Minister of Science and Higher education from 29th of September 2023 „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:	
G.K. 1	
Skills– Graduate is able to:	
G.S. 1	
Social Competencies – Graduate is ready for:	
SC1	Establishing and maintaining a deep and respectful contact with the patient, and showing understanding for worldview and cultural differences
SC2	Observance of medical secrecy and patient rights

6. CLASSES

Form of class	**Class contents**	**Effects of Learning**
Seminar 1	Medical aspects of alcohol dependence 1. Neurobiological basis of addiction, the role of the reword system and nueurohormones 2. Motives for using alcohol 3. Definitions of terms: risky drinking, harmful drinking, alcohol addiction .4.Addiction diagnosis: diagnostic criteria based on the ICD 10. ICD 11 and DSM5 classification, alcohol withdrawal syndrome 5. Harms related to the use of alcohol: somatic, psychological, social	C.W36, D.W12, D.W13, D.W16, E.W18 p.5
Seminar 2	Addiction to drugs and new psychoactive substances 1. Risk factors for the development of addiction to substances: social, psychological, genetic, biological 2. The pathophysiology of addictions 3. Addiction diagnosis: diagnostic criteria based on the ICD 10, ICD11 and DSM 5 classification; models of harmful and risky use 4. Groups of psychoactive substances opioids, cannabinoids, hallucinogens, stimulants, benzodiazepines, new psychoactive substances ("legal highs") - action, withdrawal syndromes 5. Effects and health and social harms of the mentioned groups of substances	C.W36, D.W12, D.W13, D.W16, E.W18 p.5
Seminar 3	Addiction therapy 1. The concept of psychological mechanisms of addiction.	C.W36, D.W12, D.W13, D.W16, E.W18 p.5

	2. Basic assumptions of addiction therapy 3. Motivating to start therapy 4. Organization of the work of addiction treatment facilities 5. Ethical aspects of therapy of addicted patients and their family members, professsional 6. The role of self-supporting groups, including Alcoholics Anonymous and Narcotics Anonymous in the treatment of addicts	
Seminar 4	A family with an addiction problem 1. Co-addiction 2. Roles of children in alcoholic family. 3. Adult Children of the Alcoholic 4. Domestic violence	C.W36, D.W12, D.W13, D.W16, E.W18 p.5
Seminar 5	Behavioral addictions 1.Definition of behavioral addictions 2.Diagnosing of behavioral addictions 3. Risk factors for the development of behavioral addictions 4. The most popular behavioral addictions: gambling; sex; overeating; addiction to new technologies; smartphone, internet, games, 5. Harm connected to behavioral addictions 6. Behavioral addiction treatment	C.W36, D.W12, D.W13, D.W16, E.W18 p.5
Practical classes 1-2	Methods of early detection and treatment of substances use disorders. Role of screening test.	E.U11, E.U26, E.U28, E.U29
Practical classes 3-4	Diagnosing and motivating addicts to the therapy, short therapeutic interventions, motivational interview, referral to specialist therapeutic centers. Selection of the appropriate therapeutic model depending on the severity of the addiction problem in the patient	E.U11, E.U26, E.U28, E.U29
Practical classes 5-6	Supporting family members suffering from addiction problems: adults and children. The problem of children of addicts - developmental and psychological consequences, adult children of alcoholics (ACA).	E.U11, E.U26, E.U28, E.U29
Practical classes 7-8	Cooperation with members of self-help movements, meeting with members of AA and NA	E.U11, E.U26, E.U28, E.U29
Practical classes 9-10	Presentation of practical tools and methods of therapy of addiction. providing support to the victims of physical and mental violence.	E.U11, E.U26, E.U28, E.U29

7. LITERATURE

Obligatory

1. Chapter 14. Substance misuse. In: Semple D, Smyth R. Oxford Handbook of Psychiatry. Fourth Edition. Oxford University Press. 2019.
2. Chapter 6. Disorders Due to Substance Misuse. In: Tyrer P. Making Sense of the ICD-11: For Mental Health Professionals. Cambridge University Press. 2023

Supplementary

1. The - Addiction- Recovery-Skills-Workbook- Suzette Glasner-Edwards
New Harbinger Publications, Oakland,2015

8. VERIFYING THE EFFECT OF LEARNING

Code of the course effect of learning	Ways of verifying the effect of learning	Completion criterion

C.W36, D.W12, D.W13, D.W16, E.W18 p.5; E.U11, E.U26, E.U28, E.U29	Test	≥ 60% correct answers Pass without grade
C.W36, D.W12, D.W13, D.W16, E.W18 p.5; E.U11, E.U26, E.U28, E.U29	Oral check of preparation to each seminar	Active participation on seminars
C.W36, D.W12, D.W13, D.W16, E.W18 p.5; E.U11, E.U26, E.U28, E.U29	Oral check of preparation for each practical classes.	Active participation in practical classes

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)*

1. Class attendance is obligatory
2. All absences should be made up for, and form and date of making up for them should be agreed with person responsible for teaching.
3. Active participation in the classes is a condition for obtaining credit.

Library Training

1. IMPRINT	
Academic Year	2025/2026
Department	Faculty of Medicine
Field of study	Medicine
Main scientific discipline	Medical Sciences
Study Profile	General academic
Level of studies	Uniform MSc
Form od studies	Full time studies

Type of module / course	Obligatory
Form of verification of learning outcomes	Completion
Educational Unit / Educational Units	Main Library of the Medical University of Warsaw Warszawa, ul. Żwirki i Wigury 63, tel. 116-60-11, e-mail : biblioteka@wum.edu.pl
Head of Educational Unit / Head of Educational Units	mgr Agnieszka Czarnecka
Course coordinator	mgr Agnieszka Czarnecka tel.: 22 116 60 11, 22 116 60 10, e-mail: agnieszka.czarnecka@wum.edu.pl
Person responsible for syllabus	mgr Agnieszka Czarnecka tel.: 22 116 60 11, 22 116 60 10, e-mail: agnieszka.czarnecka@wum.edu.pl
Teachers	mgr Agnieszka Czarnecka

2. BASIC INFORMATION				
Year and semester of study	1st year, 1, 2nd semester		**Number of ECTS credits**	0
FORMS OF CLASSES		**Number of hours**	**ECTS credits calculation**	
Contacting hours with academic teacher				
Lecture (L)				
Seminar (S)		2 (2 as e-learning)		
Classes (C)				
e-learning (e-L)				
Practical classes (PC)				

Work placement (WP)		
Unassisted student's work		
Preparation for classes and completions	2	

3. COURSE OBJECTIVES	
O1	To gain knowledge about the organizational structure of the library and information system of the Medical University of Warsaw
O2	To gain knowledge about the library offer
O3	To gain knowledge about the library units and services
O4	Prepare for independent and effective use of the library resources
O5	Prepare to find information about library collections using the library's online catalogues

4. STANDARDS OF LEARNING – DETAILED DESCRIPTION OF EFFECTS OF LEARNING	
Code and number of effect of learning in accordance with standards of learning	**Effects in the field of:**
Knowledge – Graduate knows and understands:	
Skills– Graduate is able to:	
B.U8.	use medical databases and correctly interpret the information they contain to solve problems in basic and clinical sciences

5. ADDITIONAL EFFECTS OF LEARNING	
Number of effect of learning	**Effects in the field of:**
Knowledge – Graduate knows and understands:	

K1	Organization and principles of functioning of the University's library and information system
K2	Traditional and electronic sources of scientific information available in the library
K3	Online catalog search methodology
K4	Library website - the main source of information about resources, services and rules of using the library's offer
K5	Selected scientific libraries in Warsaw, including libraries with a medical profile
Skills– Graduate is able to:	
S1	Determine own information needs and know how to meet them
S2	Use resources and services offered by the libraries of the MUW library information system
S3	Use the library's information workshop and search for literature on a specific topic
S4	Use the resources of scientific libraries in Warsaw
Social Competencies – Graduate is ready for:	
SC1	Understanding the need to develop skills in obtaining materials needed in the learning process

6. CLASSES		
Form of class	**Class contents**	**Effects of Learning**
Seminar (e-learning)	Organization and structure of the University's library and information system, University Library - provision of services regulations, tasks, resources, tools for remote access to e-collections, hardware and technical facilities; Service units (characteristics, location), library services (including sale of scripts, self-service lending and returns, interlibrary loans); Preparation to use resources - placing orders, extension of the book return deadline, managing the user account; Searching for scientific information - Aleph catalog, PRIMO multisearch engine (rules of use, characteristics of basic functionalities), scientific databases; Library website – information website for presenting resources and services; Selected scientific libraries in Warsaw	B.U8. K1-K5 S1-S4 SC1

7. LITERATURE

Obligatory
Supplementary

8. VERIFYING THE EFFECT OF LEARNING		
Code of the course effect of learning	**Ways of verifying the effect of learning**	**Completion criterion**
B.U8. K1-K5 S1-S4 SC1	Test on the e-learning platform – 30 questions. The test consists of multiple choice questions (choosing one correct answer) and true/false questions.	Provide correct answers to 67% of the 30 test questions.

9. ADDITIONAL INFORMATION
1. The seminar is held on the WUM e-learning platform. 2. The condition for passing the subject is obtaining a positive result of the test at the end of e-learning seminar. 3. The number of attempts at the test is unlimited. 4. Any questions concerning the subject should be send to the e-mail address: agnieszka.czarnecka@wum.edu.pl

ATTENTION

The final 10 minutes of the last class in the block/semester/year should be allotted for students to fill out Survey of Evaluation of Classes and Academic Teachers.

Physical Education

1. IMPRINT	
Academic Year	2025/2026
Department	Faculty of Medicine
Field of study	Medicine
Main scientific discipline	Medical Science
Study Profile	General academic
Level of studies	Uniform MSc
Form of studies	Full-time studies
Type of module / course	Obligatory
Form of verification of learning outcomes	Completion
Educational Unit / Educational Units	Department of Physical Education and Sport, 2c Trojdena St., Phone: 48 22 57 20 528;9 e-mail: studiumwfis@wum.edu.pl
Head of Educational Unit / Heads of Educational Units	mgr Jerzy Chrzanowski MA
Course coordinator	Mgr Michał Sieńko MA; e-mail: michal.sienko@wum.edu.pl
Person responsible for syllabus*)*	Mgr Michał Sieńko MA
Teachers	Mgr Michał Sieńko MA

2. BASIC INFORMATION

Year and semester of studies	Year 1, semester 1	**Number of ECTS credits**	0.00

FORMS OF CLASSES	**Number of hours**	**ECTS credits calculation**
Contacting hours with academic teacher		
Lecture (L)		
Seminar (S)		
Classes (C)	60	0.00
e-learning (e-L)		
Practical classes (PC)		
Work placement (WP)		
Unassisted student's work		
Preparation for classes and completions		

3. COURSE OBJECTIVES

O1	Significance of physical activity in human life.
O2	Aim and forms of physical activity.
O3	Physical activity and influence on the development of fitness.

4. STANDARDS OF LEARNING – DETAILED DESCRIPTION OF EFFECTS OF LEARNING

Code and number of effect of learning in accordance with standards of learning	**Effects in the field of:** *(in accordance with appendix to the Regulation of Minister of Science and Higher education from 29th of September 2023)*
Knowledge – Graduate* knows and understands:	
G.K1 - D.W3	human behaviour conducive to maintaining health and the principles of motivating the patient towards health-promoting behaviour (Prochaska and DiClemente change model, motivational interviewing);
G.K2 - D.W4	the concept of stress, including eustress and distress, and the impact of stress on the aetiopathogenesis and course of somatic diseases and psychiatric disorders, and mechanisms of coping with stress;
Skills– Graduate* is able to:	
G.S1 – D.U4	demonstrate responsibility for improving their own skills and transferring knowledge to others

** In appendix to the Regulation of Minister of Science and Higher education from 29th of September 2023 „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	rules of statics and biomechanics in relation to the human body during a specific physical activity
K2	Knows and understands the rules of team games
K3	The role of physical activity in life
Skills– Graduate is able to:	
S1	use basic knowledge about your own physical limitations while performing the basic elements of the technique of selected sports and recreational disciplines, assess your own deficits and educational needs, and plan physical activity and its evaluation
Social Competencies – Graduate is ready for:	
SC1	promoting patterns of healthy life, recognizing health needs and planning activities in the field of prevention and promotion of "whole life sports"

6. CLASSES

Form of class	Class contents	Effects of Learning
C1-C15 practical	In line with the sports program or recreational discipline chosen by the student, covering the development of motor skills: strength, speed, endurance, motor coordination, agility and flexibility. Learning about new and attractive forms of physical activity, including "sports of the whole life" (individual and team), ensuring active participation in physical culture. Movement as a factor in preventing disease and strengthening health.	D.W3, D.W4, D.U4, K1, K2, K3, S1, SC1

7. LITERATURE

Obligatory

In line with the selected sports program or recreational discipline - presented during the first class, available for viewing on the Study website www.swfis.wum.edu.pl in the Didactics tab.

Supplementary

In line with the selected sports program or recreational discipline - presented during the first class, available for viewing on the Study website www.swfis.wum.edu.pl in the Didactics tab.

8. VERIFYING THE EFFECT OF LEARNING

Code of the course effect of learning	Ways of verifying the effect of learning	Completion criterion

D.W3, D.W4, D.U4, K1, K2, K3, S1, SC1	*- observation of the student's work* *- assessment of activity during classes* *- fitness tests*	*- regular attendance at classes (attendance 100%)* *- participation in fitness tests*

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)*

Sports and recreational sections of the AZS WUM University Club.
The regulations of classes and information on the possibility of making up for classes due to absences can be found on the website of Studium: studiumwfis@wum.edu.pl in the Didactic tab.

Medical Psychology

1. IMPRINT	
Academic Year	2025/2026
Department	Faculty of Medicine
Field of study	Medicine
Main scientific discipline	Medical sciences
Study Profile	General academic
Level of studies	Uniform MSc
Form of studies	Full time studies
Type of module / course	Obligatory
Form of verification of learning outcomes	Completion
Educational Unit / Educational Units	Studium Psychologii Zdrowia [Department of Health Psychology] ul. Litewska 14/16, 00-575 Warszawa, Tel. +48 22 116 92 11
Head of Educational Unit / Heads of Educational Units	Professor Dorota Włodarczyk, MA, PhD
Course coordinator	Magdalena Łazarewicz, MA, PhD magdalena.lazarewicz@wum.edu.pl
Person responsible for syllabus	Magdalena Łazarewicz, MA, PhD magdalena.lazarewicz@wum.edu.pl
Teachers	Magdalena Łazarewicz, MA, PhD (magdalena.lazarewicz@wum.edu.pl) Tomasz Duda, MA, PhD (tomasz.duda@wum.edu.pl) Marcin John, MA (marcin.john@gmail.com) Adrianna Wielgopolan, MA (adrianna.wielgopolan@psych.uw.edu.pl)

2. BASIC INFORMATION			
Year and semester of studies	I year, 1st and 2nd semester	**Number of ECTS credits**	2.00

FORMS OF CLASSES **Contacting hours with academic teacher**	**Number of hours**	**ECTS credits calculation**
Lecture (L)		
Seminar (S)	10	0.4
Classes (C)	10	0.4
e-learning (e-L)		
Practical classes (PC)		
Work placement (WP)		
Unassisted student's work		
Preparation for classes and completions	30	1.2

3. COURSE OBJECTIVES	
O1	Understanding the psychosocial context of practicing medicine.
O2	Acquiring and understanding selected psychosocial mechanisms of human functioning in health and disease, necessary in medical practice.
O3	Learning and understanding specific psychosocial problems of selected groups of patients.
O4	Acquiring the ability to use acquired knowledge and psychosocial skills to solve problems in medical practice (observation, identification, planning, action).
O5	Shaping a biopsychosocial approach to the patients and being guided by their well-being.

4. STANDARDS OF LEARNING – DETAILED DESCRIPTION OF EFFECTS OF LEARNING	
Code and number of the effect of learning in accordance with standards of learning	**Effects in the field of:**
Knowledge – Graduate* knows and understands:	
D.W1.	the psycho-physical development of the human being from birth to death, taking into account the specificities of physical, emotional, cognitive and social development
D.W2.	concepts of health and illness, the influence of the social environment (family, work, social relations) and socio-cultural conditions (origin, social status, religion, nationality and ethnic group) on the patient's health

D.W3.	human behaviour conducive to maintaining health and the principles of motivating the patient towards health-promoting behaviour (Prochaska and DiClemente change model, motivational interviewing)
D.W4.	the concept of stress, including eustress and distress, and the impact of stress on the aetiopathogenesis and course of somatic diseases and psychiatric disorders, and mechanisms of coping with stress
D.W5.	social attitudes towards illness, disability and old age and the specific impact of stereotypes, prejudice and discrimination
D.W8.	psychosocial consequences of acute and chronic illness in children, including adolescents, and adults
D.W9.	psychosocial consequences of hospitalisation of children, including adolescents, and adults in emergency situations and chronic diseases
D.W10.	psychosocial consequences of the illness for the patient's family (family with an ill child, including teenagers, adults and the elderly)
D.W11.	the role of the patient's family in the illness process (recognition of the illness, adaptation to the illness, recovery) and ways of coping with difficult situations (progression of the illness, dying process, bereavement)
D.W13.	forms of violence, including domestic violence, the social determinants of the various forms of violence and the role of the doctor in recognising it, and the rules for dealing with suspected cases of violence, including the "Blue Card" procedure
Skills– Graduate* is able to:	
D.U7	develop and improve self-awareness, self-reflection and self-care, and reflect with others on their own way of communicating and behaving
D.U8	recognise their own emotions and manage them in their relationships with others in order to perform their work effectively despite their own emotional reactions

** 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 field of:**
Knowledge – Graduate knows and understands:	
K1	-
Skills– Graduate is able to:	
S1	-
Social Competencies – Graduate is ready for:	
SC1	-

6. CLASSES

Form of class	**Class contents**	**Effects of Learning**
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.U7., D.U8.

	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.W4., D.W13., D.U8.
	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.W2., D.W3.
C	C1 – Class 1 - The concept of health-related quality of life, psychosocial consequences of disease and adaptation to illness. Attitude towards health and illness.	D.W1., D.W8., D.W9, D.W10.
	C2 – Class 2 - Psychological aspects of disability. Health and illness across lifespan.	D.W5.
	C3 – 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.W11.
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.W1., D.W2., D.W3., D.W4., D.W5., D.W8., D.W9., D.W10., D.W11., D.W13.	Written colloquium - the colloquium consists of 5 questions and a case study. Two questions concern knowledge from the entire course (they do not relate to the case study). Three questions concern a case study and require students to use their knowledge and skills to solve a problem from clinical practice.	For each question you can get 1, 0.75, 0.50, 025, or 0 points. The colloquium requires obtaining a minimum of 60% of points for all questions.
D.U7., D.U8.	Active participation in individual, in pairs and group activities (discussions and exercises) during classes.	Assessment of skills and competencies based on the observation of the student while performing the task during the exercises. Required minimal acceptable level of performance.

9. ADDITIONAL INFORMATION

Attendance: Students are expected to attend and actively participate in all seminars and classes. Only one excused absence is permitted during the course. In the event of such an absence, students must make up the missed work. They should notify the instructor as soon as possible to determine the method for covering the missed material (e.g., an additional question on the test or an oral response to the instructor).
Group changes (during seminars) or subgroup changes (during classes) are allowed only with prior approval from the course coordinator. Punctuality is essential. Arriving more than 15 minutes late will be counted as an absence. Repeated lateness may require the student to complete additional work—such as an essay or brief literature review—at the instructor's discretion, depending on the material missed. To maintain a productive learning environment, students must turn off or silence all electronic devices that could disrupt the class.
Final Test: The final test will be held during the last seminar (7th week of the course). It will consist of:

- Case Study – Analysis of a patient's case, answered through short open-ended questions.
- Two Theoretical Questions – Open-ended responses.

Students may attempt the test up to three times in total (one initial attempt and two retakes).

Contact information to the **course coordinator**: Magdalena Łazarewicz, MA, PhD, 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).

ATTENTION

The final 10 minutes of the last class of the block/semester/year should be allotted for students to fill out the Survey of Evaluation of Classes and Academic Teachers

FIRST MEDICAL AID WITH ELEMENTS OF NURSING

1. IMPRINT	
Academic Year	2025/2026
Department	Faculty of Medicine
Field of study	Medicine
Main scientific discipline	Medical sciences
Study Profile	General academic
Level of studies	Uniform MSc
Form of studies	Full time studies
Type of module / course	Obligatory
Form of verification of learning outcomes	Credit on completion (test with mark)
Educational Unit / Educational Units	1st Department of Anesthesiology and Intensive Care WUM Lindleya 4 street, 02-005 Warsaw, Poland klinanest1@wum.edu.pl Telephone: +48 22 502 17 21 2nd Department of Anesthesiology and Intensive Care WUM Banacha 1a street, 02-097 Warsaw, Poland kait.csk@uckwum.pl Telephone: +48 22 317 98 61 Department of Pediatric Anesthesiology and Intensive Care WUM Zwirki I Wigury 63A street, 02-091 Warsaw, Poland anestezjologia.dziecieca@uckwum.edu.pl Telephone: +48 22 317 98 61
Head of Educational Unit / Heads of Educational Units	dr hab. n. med. Janusz Trzebicki dr hab. n. med. Paweł Andruszkiewicz dr hab. n. med. Izabela Pągowska-Klimek
Course coordinator	dr hab. n. med. Janusz Trzebicki Janusz.trzebicki@wum.edu.pl
Person responsible for syllabus	Marek Janiak MD PhD Tel.: 22 502 17 21 email: marek.janiak@wum.edu.pl

Teachers	1st Department of Anesthesiology and Intensive Care: dr hab. n. med. Janusz Trzebicki, Beata Błaszczyk MD PhD, Jan Biławicz MD PhD, Lidia Jureczko MD PhD, Marcin Kołacz MD PhD, Rafał Kowalczyk MD PhD, Jan Pluta MD PhD, dr Paweł Zatorski MD PhD, Marek Janiak MD PhD, Piotr Mieszczański MD, Romana Cal MD, Przemysław Bornsztajn MD, Paweł Wrzesień MD 2nd Department of Anesthesiology and Intensive Care: dr hab. n. med. Paweł Andruszkiewicz, dr hab. n. med. Mateusz Zawadka, Wojciech Romanik MD PhD, Anna Kosińska MD, Marta Dec MD, Paula Dudek MD, Jarosław Gadomski MD, Aleksandra Święch-Zarzycka MD, Dawid Tomasik MD, Paulina Walczak-Wieteska MD, Łukasz Wróblewski MD, Aleksandra Zawiślak-Michalak MD, Agata Graczyńska MD Department of Pediatric Anesthesiology and Intensive Care: dr hab. n. med. Izabela Pągowska-Klimek**,** Magdalena Mierzewska-Schmidt MD PhD, Maciej Kaszyński MD PhD, Katarzyna Mazur-Wołynko MD, Dariusz Skaba MD

2. BASIC INFORMATION

Year and semester of studies	I year, II semester	**Number of ECTS credits**	3.00

FORMS OF CLASSES **Contacting hours with academic teacher**	**Number of hours**	**ECTS credits calculation**
Lecture (L)	15	0.6
Seminar (S)	6	0.25
Classes (C)	24	0.95
e-learning (e-L)		
Practical classes (PC)		
Work placement (WP)		
Unassisted student's work		
Preparation for classes and completions	30	1.2

3. COURSE OBJECTIVES

O1	Acquiring resuscitation skills based on most recent guidelines
O2	Teaching students methods of assessing basic vital parameters In life-threatening conditions
O3	Teaching recognition of life-threatening situations
O4	Acquiring basic nursing skills both in and out of hospital

4. STANDARDS OF LEARNING – DETAILED DESCRIPTION OF EFFECTS OF LEARNING	
Code and number of the effect of learning in accordance with standards of learning	**Effects in the field of:**
Knowledge – Graduate* knows and understands:	
F.W9	Cardio-pulmonary resuscitation guidelines for neonates, children and adults
C.W36	Symptoms of most common poisoning of chosen drug groups, alcohols and other psychoactive substances, mushrooms and heavy metals
Skills– Graduate* is able to:	
E.U3	Take a medical history in a life or health threatening situation with the use of the SAMPLE schematic (S-symptoms, A- allergies, M-medications, P-past medical history, L-last meal, E-events leading to injury/illness)
F.U4	Recognize most common life threatening conditions with the use of imaging techniques
E.U11	Recognize signs of risky and harmful alcohol use and problematic use of other psychoactive substances, symptoms of addiction to psychoactive substances or behavioral addiction and propose proper therapeutic or medical management
E.U14	Perform medical procedures, including: 1) Measurement and assessment of basic vital signs (temperature, heart rate, arterial blood pressure); 2) Various forms of inhalational therapy and choice of inhaler use adequate to the clinical state of a patient; 3) Measurement of peak flow expiration; 4) Oxygen therapy using non-invasive methods; 5) Non-instrumental and instrumental methods of securing the airway; 6) Intravenous, intramuscular and subcutaneous administration of medication; 7) Blood taking and securing for microbiological and cytological studies; 8) Acquiring arterial and arterialized capillary blood samples; 9) Acquiring swabs for microbiological and cytological studies; 10) Urinary male and female catheterization; 11) Placement of nasogastric tube; 12) Enema; 13) Acquiring and interpretation of a standard electrocardiogram at rest; 14) Defibrillation, electric cardioversion and external electrostimulation; 15) Simple strip testing, including measurement of glucose levels with the use of a glucometer; 16) Pleural procedures: puncture and pneumothorax decompression; 17) Anterior nasal tamponade placement; 18) Ultrasound assessment in life threatening conditions using the FAST (Focused Assessment with Sonography in Trauma) or similar protocol and interpretation of the results.
F.U3	Assess and manage a simple wound including local anesthesia wound infiltration, placement and removal of surgical sutures, placement and change of immobilizing wound dressing
F.U6	Temporary immobilization of a limb including adequate choice of immobilization type in standard clinical scenarios and assess adequate limb blood perfusion following the placement of an immobilizing dressing

F.U8	Control external bleeding
F.U11	Perform basic life support (BLS) in adults according to European Resuscitation Council (ERC) guidelines, including the use of automated external defibrillation
F.U9	Perform pediatric basic life support (PBLS) in newborns and children according to ERC guidelines

** 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:	
Skills– Graduate is able to:	
Social Competencies – Graduate is ready for:	

6. CLASSES

Form of class	**Class contents**	**Effects of Learning**
Lectures and e-learning materials		
W1	Introduction to simulation training 1. Vascular cannulation 2. Transport of patient in life threatening condition	
W2	Unconscious patient management.	F.U4. F.U9. F.U11.
W3	Basic Life Support. Use of AED.	F.W9. F.U9. F.U11.
W4	Pediatric BLS. Life threatening conditions in children.	F.W9. F.U9.
W5	First aid in poisoning.	C.W36. C.W37.
W6	Cardiac arrest in special circumstances.	F.W9.
W7	Pulmonary and cardiac life threatening conditions.	F.W9. F.U4.
W8	Metabolic and neurological life threatening conditions.	F.W9. F.U4. F.W.10. C.W36. C.W37.
W9	Monitoring.	E.U3.
W10	History of resuscitation. Ethical and legal elements related to first aid	F.W9.
Seminars		

S1	Introduction: safety of the rescuer, infection risk. Survival chain. ABCD approach. First aid kit contents.	F.W9.
S2	Emergency medical services system, patient transportation, diagnostic suites, emergency departments, intensive care units (a walk in the hospital via a “trauma patient route”	F.W9. C.W36. C.W37. F.U4. F.U8. F.U6.
S3	Repetition on cases, completion of course with test	E.U3. E.U11. F.W9. F.W10. C.W36. C.W37. F.U3. F.U4. F.U6. F.U9. F.U11.
Practical classes		
C1	BLS and PBLS + AED	F.U9. F.U11.
C2	Assessment of BLS + AED skills. Management of trauma patient, life threatening conditions	F.W9. F.W10. F.U4. F.U6. F.U8. F.U9. F.U11.
C3	Nursing skills (injections: subcutaneous, intramuscular, intravenous, infusion of fluids, blood pressure measurement, connecting a cardio monitor, taking an ECG)	E.U14.

7. LITERATURE

Obligatory
2021 European Resuscitation Guidelines
Supplementary

8. VERIFYING THE EFFECT OF LEARNING

Code of the course effect of learning	Ways of verifying the effect of learning	Completion criterion
E.U3. E.U11. E.U14, F.W9. F.W10. C.W36. C.W37. F.U3. F.U4. F.U6. F.U8. F.U9. F.U11.	Presence during classes Presence during lectures and e-learning materials Assessment of practical skills – observation by trainer Assessment of theoretical knowledge - test	Active participation in all seminars and practical classes. Completion of all lectures including e-learning materials. Independent management of cardiopulmonary resuscitation (BLS skills) – assessed by instructor. Completion of single best answer multiple choice questions (MCQ) – 25 test questions (marking criteria below as seen under point 9)

9. ADDITIONAL INFORMATION

During the practical classes and on contact with patients, we recommend medical clothing with short sleeves. Please do not wear private clothing. In case of using a white apron on personal clothing, the apron should be fastened. Long hair should be pinned back. It is necessary to change to theatre applicable footwear with adherence to safety rules. During practical classes in areas with patients – the rule "nothing below elbow" should be applied – that is watches, jewelry should be taken off. The "5 moments of hand hygiene" should be applied. Diagnostic medical gloves should be donned only after cleaning and/or disinfection of hands, directly before patient contact.

Prior to practical classes in the Medical Simulation Centre, it is mandatory to complete the relevant materials and e-lectures provided.
Any student not prepared for practical classes may not be allowed to participate. A mini-test may be imposed to test preparedness.

In case of absence during classes, it is mandatory to participate with another group. All issues related to the absence must be reported to the head of the department.
The student groups are divided to be under the care of 1st Department (Lindleya) or 2nd Department (Banacha) – please see the master program provided by the deanery. The final test is organized by the Pediatric Department of Anesthesiology (1MC3)

Before taking the final test, the student is obligated to understand the materials from the lectures and receive a pass during the BLS classes.
A second attempt will be allowed during the make-up examination session.

The subject is finalized and signed in the Pediatric Department of Anesthesiology and Intensive Care MUW.
Any missed classes need to be consulted with the Head of the Pediatric Department of Anesthesiology and Intensive Care MUW or any person the Head deems responsible for ED students: Telephone 22 317 98 61.

Marking criteria:
2.0 (fail) – absence in classes/lectures or lack of BLS skills or 0-12 points on test
3.0 (satisfactory) – presence in classes and done lectures, adequate BLS skills and 13-17 points on test
3.5 (above satisfactory) – presence in classes and done lectures, adequate BLS skills and 18-19 points on test
4.0 (good) – presence in classes and done lectures, adequate BLS skills and 20-22 points on test
4.5 (above good) – presence in classes and done lectures, adequate BLS skills and 23 points on test
5.0 (very good) – presence in classes and done lectures, adequate BLS skills and 24-25 points

ATTENTION

The final 10 minutes of the last class of the block/semester/year should be allotted for students to fill out the Survey of Evaluation of Classes and Academic Teachers

INTERNSHIP AFTER THE FIRST YEAR OF STUDIES
Patient care

1. IMPRINT	
Academic Year	2025/2026
Department	Faculty of Medicine
Field of study	Medicine
Main scientific discipline	Medical Science
Study Profile	general academic
Level of studies	uniform MSc
Form of studies	Full time studies
Type of module / course	obligatory
Form of verification of learning outcomes	Completion
Educational Unit / Educational Units	
Head of Educational Unit / Heads of Educational Units	
Course coordinator	Joanna Kacperczyk-Bartnik, MD, PhD, e-mail: joanna.kacperczyk-bartnik@wum.edu.pl (1W61) II Department of Obstetrics and Gynecology, MUW 2 Karowa St., 00-315 Warsaw Phone: 48 22 59 66 421
Person responsible for syllabus	
Teachers	

2. BASIC INFORMATION			
Year and semester of studies	After the first year of studies	**Number of ECTS credits**	4

FORMS OF CLASSES **Contacting hours with academic teacher**	**Number of hours**	**ECTS credits calculation**
Lecture (L)		
Seminar (S)		
Classes (C)		
e-learning (e-L)		
Practical classes (PC)		
Work placement (WP)	120	4
Unassisted student's work		
Preparation for classes and completions		

3. COURSE OBJECTIVES	
O1	Acquiring practical skills in patient care
O2	Gaining orientation in the hospital organizational system.
O3	Acquainting the student with the role of the nurse in the process of nursing and treating the patient

4. STANDARDS OF LEARNING – DETAILED DESCRIPTION OF EFFECTS OF LEARNING	
Code and number of the effect of learning in accordance with standards of learning	**Effects in the field of:** *(in accordance with appendix to the Regulation of Minister of Science and Higher education from 29th of September 2023)*
Knowledge – Graduate* knows and understands:	
G.K1	
Skills– Graduate* is able to:	
E.U14 pkt 1	perform medical procedures and treatments, including: 1) measurement and assessment of basic vital functions (temperature, heart rate, blood pressure) and monitoring them using a cardiomonitor and a pulse oximeter;
E.U14 pkt 6	perform medical procedures and treatments, including: 6) intravenous, intramuscular and subcutaneous drug administration;
E.U14 pkt 7	perform medical procedures and treatments, including: 7) collecting and securing blood for laboratory tests, including microbiological ones;
E.U15	use personal protective equipment appropriate to the clinical situation;

E.U18	keep the patient's medical records, including in electronic form, in accordance with the law;
F.U2	apply and change a sterile dressing;

** The annexes to the Regulation of the Minister of Science and Higher Education of September 29th, 2023 mention a "graduate", not a student*

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

Number of effect of learning	**Effects in the fields of:**
Knowledge – Graduate knows and understands:	
K1	
Skills– Graduate is able to:	
S1	familiarized himself with the work of a nurse and acquired skills in performing basic nursing procedures such as: bed-making and changing bed linen, positioning and toileting the patient, sanitary services, feeding patients, preparing medications to be administered to patients
S2	Monitor the patient's condition in the postoperative period based on basic vital parameters
Social Competencies – Graduate is ready for:	
SC1	establishing and maintaining deep and respectful contact with the patient, as well as showing understanding for differences in worldviews and cultures
SC2	being guided by the patient's well-being, taking action towards the patient based on ethical principles, with awareness of the social conditions and limitations resulting from the disease
SC3	respecting medical confidentiality and patient rights
SC4	perceiving and recognizing one's own limitations and making self-assessment of deficits and educational needs
SC5	promoting pro-health behaviors
SC6	using objective sources of information
SC7	formulating conclusions from one's own measurements or observations
SC8	implementing 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
SC9	formulating opinions on various aspects of professional activity
SC10	taking responsibility related to decisions made as part of professional activity, including in terms of one's own safety and the safety of others

6. CLASSES

Form of class	**Class contents**	**Effects of Learning**
Work placement (WP)	- Hospital organizational system and organization of nursing care for the patient - Patient nursing medical records and their maintenance - Procedures in the event of exposure to a bloodborne infection	E.U14 pkt 1, 6, 7, E.U15, E.U18, F.U2, S1, S2, SC1-SC10

	- Collection of materials used in laboratory diagnostics - Basic procedures and treatments: measuring body temperature, measuring pulse, non-invasive blood pressure measurement, and monitoring vital signs using a cardiac monitor and pulse oximeter - Assessment of pressure sores and the use of appropriate dressings - Peripheral catheter insertion - Principles of postoperative monitoring based on basic vital signs - Nursing practice and skills in performing basic nursing procedures: bed-making and linen changing techniques, patient positioning and toileting, sanitary services, feeding patients, and preparing medications for administration to patients	

7. LITERATURE

Obligatory

Supplementary

8. VERIFYING THE EFFECT OF LEARNING

Code of the course effect of learning	Ways of verifying the effect of learning	Completion criterion
E.U14 pkt 1, 6, 7, E.U15, E.U18, F.U2, S1, S2, SC1-SC10	Completed internship card and information about the internship coordinator with: - assessment of practical skills (made by the internship coordinator based on student observation) - max 8 points Rating scale: very good (5.0): 8 points good (4.0): 6-7 points sufficient (3.0): 4-5 points insufficient (2.0): below 4.0 points - assessment of social competences and professionalism (made by the internship coordinator based on student observation) - max 10 points Rating scale: very good (5.0): 9-10 points good (4.0): 7-8 points sufficient (3.0): 5-6 points insufficient (2.0): below 5.0 points	The condition for passing the internship is to obtain at least a satisfactory grade in terms of both the practical skills and social competences. Placement of the internship by the Internship Supervisor of the Medical University of Warsaw

9. ADDITIONAL INFORMATION

Information on internships is available on the faculty website: https://ed.wum.edu.pl/node/763
Please read the Regulations for internships at the Faculty of Medicine, WUM, available on the website.
Internships are held during the summer holidays.

VOCATIONAL TRAINING:

Patient care – 4 weeks – 120h
1st year, 6-year program ED students
Faculty of Medicine

Upon completion of each year of their study students are required to take their summer holiday vocational training which is mandatory and is included in the Polish medical curriculum.

First year students undergo a one-month nursing training being attached to the nursing personnel as nursing assistants (auxiliaries at teaching hospitals of medical academies) universities either in Poland or selected foreign countries.
At a teaching hospital in Poland the head of the ward/department or an appointed instructor in charge provides a detailed programme as well as scheduled duties and maintains both supervision and assessment of student's performance.

The instructor in charge of first year students should be a fully qualified nurse who will supervise all nursing duties performed by students also those carried out with regard to patients in severe condition requiring intensive care.

Students are expected to have three to nine seven-hour duties on all shifts including up to three night shifts.

The main goals of the training are:

1. To acquaint students with a significant role of the nurse in the nursing and treatment of the patient,
2. To enable students to:
   - acquire skills in performing ward routines e.g., taking temps and BP, making beds and
   - changing bedclothes, maintaining patients' personal hygiene, offering bedpans and
   - urinals, feeding patients, preparing drugs ordered for administration,
   - learn the techniques of giving subcutaneous and intramuscular injections and instituting intravenous infusions.

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.

*Clinical Anatomy – optional course

1. IMPRINT	
Academic Year	2025/2026
Department	Faculty of Medicine
Field of study	Medicine
Main scientific discipline	Medical sciences
Study Profile	General academic
Level of studies	Uniform MSc
Form of studies	Full time studies
Type of module / course	Non-compulsory
Form of verification of learning outcomes	completion
Educational Unit / Educational Units	DEPARTMENT OF DESCRIPTIVE AND CLINICAL ANATOMY CENTER OF BIOSTRUCTURE RESEARCH Warszawa, ul. Chałubińskiego 5, tel./fax 629-52-83 e-mail : anatomy@wum.edu.pl
Head of Educational Unit / Heads of Educational Units	Prof. Bogdan Ciszek, MD, PhD
Course coordinator	**Tymon Skadorwa, MD, PhD** DEPARTMENT OF DESCRIPTIVE AND CLINICAL ANATOMY CENTER OF BIOSTRUCTURE RESEARCH Warszawa, ul. Chałubińskiego 5, tel./fax 629-52-83 e-mail : tskadorwa@wum.edu.pl
Person responsible for syllabus	*(***Tymon Skadorwa, MD, PhD** DEPARTMENT OF DESCRIPTIVE AND CLINICAL ANATOMY CENTER OF BIOSTRUCTURE RESEARCH Warszawa, ul. Chałubińskiego 5, tel./fax 48 22 629-52-83 e-mail : tskadorwa@wum.edu.pl
Teachers	Dr. Tymon Skadorwa, MD, PhD Dr. Maciej Ciołkowski, MD, PhD Dr. Robert Franczyk, MD PhD Dr. Arkadiusz Kowalczyk, MD PhD Mr. Michał Grzegorczyk, PhD

	Dr. Olga Wierzbieniec, MD Dr. Kamila Sośnicka, MD Dr. Klaudia Podkowa, MD

2. BASIC INFORMATION

Year and semester of studies	Year 1, Semester 1 part one (winter) seminar 30h, 2 ECTS Year 1, Semester 2 part two (summer) seminar 30h, 2 ECTS	**Number of ECTS credits**	4.00

FORMS OF CLASSES **Contacting hours with academic teacher**	**Number of hours**	**ECTS credits calculation**
Lecture (L)		
Seminar (S)	60	2.00
Classes (C)		
e-learning (e-L)		
Practical classes (PC)		
Work placement (WP)		
Unassisted student's work		
Preparation for classes and completions		

3. COURSE OBJECTIVES

O1	To acquire the knowledge about the construction and usage of anatomical terminology according to the internationally accepted "Terminologia Anatomica".
O2	To be able to name and describe all the anatomical structures dissected during the laboratory classes, understand their development as well as topographical relations.
O3	To understand the relationship between the structure and function of tissues, organs and systems of the human body.
O4	To be able to recognize the anatomical structures in images acquired using various imaging modalities (computed tomography, magnetic resonance imaging, ultrasound imaging, endoscopy).
O5	To understand the principles of biomechanics (movements of joints, function of muscles).
O6	To describe anatomical background of central and peripheral nervous system damage.
O7	To know the spatial, topographical relationships between organs.

O8	To know the surface projections of the organs (e.g. projection of the cardiac valves on the surface of the chest)
O9	To differentiate the normal conditions from pathology basing on post mortem and in vivo methods.

4. STANDARDS OF LEARNING – DETAILED DESCRIPTION OF EFFECTS OF LEARNING

Code and number of the effect of learning in accordance with standards of learning	**Effects in the field of:** *(in accordance with appendix to the Regulation of Minister of Science and Higher education from 29th of September 2023)*
Knowledge – Graduate* knows and understands:	
A.W1	structure of the human body in the topographical approach (upper and lower limb, chest, abdomen, pelvis, back, neck, head) and the functional approach (skeletal system, muscular system, urinary system, reproductive system, nervous system and sensory system, integumentary system); appropriate Polish and English anatomical, histological and embryological terminology;
Skills– Graduate* is able to:	
A.U3	explain the anatomical basis of the physical examination;
A.U4	infer the relationships between anatomical structures on the basis of in vivo diagnostic examinations, in particular in radiology;

** In appendix to the Regulation of Minister of Science and Higher education from 29th of September 2023, 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	Palpation sites of arterial pulse, nerves, internal organs, muscles, bones and joints
K2	Principles of anatomical research methodology
Skills– Graduate is able to:	
S1	Understand and use images of anatomical structures obtained from anatomical dissections, medical imaging modalities, as well as medical and anatomical iconography
S2	Analyse biomechanics of the joints
S3	Recognize pulse palpation sites, palpation sites of major nerve trunks and typical osseous points
S4	Recognize basic anatomical structures essential for the medical practitioner in specimens and models (see basic points list) in at least 90%

S5	Recognize the remaining anatomical structures in specimens, models, medical images (sonography, X-ray, computed tomography, magnetic resonance imaging) in at least 65%
S6	Design a simple scientific research study in anatomy
Social Competencies – Graduate is ready for:	
SC1	Show respect for the human body (corpse), social groups, religious feelings for the sake of their welfare
SC2	Further self-education with medical confidentiality

6. CLASSES

Form of class	Class contents	Effects of Learning
Seminars 1-23	**WINTER SEMESTER**	
S1 – Seminar 1	Axial skeleton, Vertebrae, Ribs.	A.W1, A.U3, AU4
S2 – Seminar 2	Upper extremity.	A.W1, A.U3, AU4
S3 – Seminar 3	Lower extremity.	A.W1, A.U3, AU4
S4 – Seminar 4	Bones of the skull 1.	A.W1, A.U3, AU4
S5 – Seminar 5	Bones of the skull 2.	A.W1, A.U3, AU4
S6 – Seminar 6	Joints, fossae, canals and spaces of the skull.	A.W1, A.U3, AU4
S7 – Seminar 7	Radiology in osteology. Repetition.	A.W1, A.U3, AU4
S8 – Seminar 8	Introduction. Spinal cord. Spinal nerve.	A.W1, A.U3, AU4
S9 – Seminar 9	Cerebral hemisphere.	A.W1, A.U3, AU4
S10 – Seminar 10	Diencephalon. Lateral and third ventricles.	A.W1, A.U3, AU4
S11 – Seminar 11	Brainstem, cerebellum. Fourth ventricle. Roots of cranial nerves.	A.W1, A.U3, AU4
S12 – Seminar 12	Cross-sections of the CNS.	A.W1, A.U3, AU4
S13 – Seminar 13	Vascular anatomy of the CNS.	A.W1, A.U3, AU4
S14 – Seminar 14	Identification of elements of the CNS pathways.	A.W1, A.U3, AU4
S15 – Seminar 15	Radiologic anatomy of the CNS.	A.W1, A.U3, AU4
S16 – Seminar 16	Skin. Neck: triangles, fascias, veins. Cervical plexus.	A.W1, A.U3, AU4
S17 – Seminar 17	Neck: muscles. Thyroid gland, parathyroids. CCA.	A.W1, A.U3, AU4
S18 – Seminar 18	Larynx, trachea. ECA. Vagus, accessory nerve. Sympathetic trunk.	A.W1, A.U3, AU4
S19 – Seminar 19	Muscles of face. Facial nerve and artery. Parotid gland.	A.W1, A.U3, AU4
S20 – Seminar 20	Oral cavity, teeth, gums, tongue, palate. Hypoglossal nerve.	A.W1, A.U3, AU4
S21 – Seminar 21	Infratemporal fossa. Nasal cavity. Trigeminal nerve.	A.W1, A.U3, AU4
S22 – Seminar 22	Orbit, eye. Dura mater. Dural sinuses.	A.W1, A.U3, AU4
S23 – Seminar 23	Ear. Hearing organ. Temporal bone. Radiologic anatomy of Head and Neck.	A.W1, A.U3, AU4
Seminars 24-47	**SUMMER SEMESTER**	

S24 – Seminar 24	Back.	A.W1, A.U3, AU4
S25 – Seminar 25	Thoracic wall. Breast.	A.W1, A.U3, AU4
S26 – Seminar 26	Thoracic cavity.	A.W1, A.U3, AU4
S27 – Seminar 27	Respiratory system.	A.W1, A.U3, AU4
S28 – Seminar 28	Heart.	A.W1, A.U3, AU4
S29 – Seminar 29	Posterior mediastinum.	A.W1, A.U3, AU4
S30 – Seminar 30	Radiologic anatomy of the thorax.	A.W1, A.U3, AU4
S31 – Seminar 31	Abdominal wall.	A.W1, A.U3, AU4
S32 – Seminar 32	Peritoneum.	A.W1, A.U3, AU4
S33 – Seminar 33	Stomach, celiac trunk, duodenum. Superior mesenteric artery.	A.W1, A.U3, AU4
S34 – Seminar 34	Jejunum, ileum. Large intestine. Inferior mesenteric artery.	A.W1, A.U3, AU4
S35 – Seminar 35	Liver, spleen, pancreas. Portal vein.	A.W1, A.U3, AU4
S36 – Seminar 36	Urinary system. Retroperitoneal space.	A.W1, A.U3, AU4
S37 – Seminar 37	Male genital organs.	A.W1, A.U3, AU4
S38 – Seminar 38	Female genital organs.	A.W1, A.U3, AU4
S39 – Seminar 39	Pelvic floor. Perineum.	A.W1, A.U3, AU4
S40 – Seminar 40	Radiologic anatomy of abdomen and pelvis.	A.W1, A.U3, AU4
S41 – Seminar 41	Shoulder and arm.	A.W1, A.U3, AU4
S42 – Seminar 42	Forearm.	A.W1, A.U3, AU4
S43 – Seminar 43	Hand.	A.W1, A.U3, AU4
S44 – Seminar 44	Gluteal region. Thigh.	A.W1, A.U3, AU4
S45 – Seminar 45	Leg.	A.W1, A.U3, AU4
S46 – Seminar 46	Foot.	A.W1, A.U3, AU4
S47 – Seminar 47	Radiologic anatomy of the limbs.	A.W1, A.U3, AU4

7. LITERATURE

Obligatory

1. Moore KL, Dalley AF, Agur AMR. Clinically oriented anatomy. Philadelphia: Wolters Kluwer/Lippincott Williams & Wilkins

The basic textbook to prepare for the laboratory classes and theoretical tests. Multiple choice questions are written according to this book and lectures. Please read clinical blue boxes as well – they will expand your understanding of clinical importance of anatomical structures you learn about. Some of clinical issues may be also included in the tests.

2. Snell RS. Clinical neuroanatomy. Philadelphia: Wolters Kluwer Health/Lippincott Williams & Wilkins; 2010

The basic textbook of clinical neuroanatomy. We recommend it for the CNS section.

3. Fitzgerald MJT, Gruener G, Mtui E. Clinical Neuroanatomy and Neuroscience. Saunders; 2012

A comprehensive textbook of clinical anatomy of the central nervous system. We recommend it for the CNS section.

4. Dauber W, Feneis H. Pocket atlas of human anatomy : Founded by Heinz Feneis. Stuttgart ; New York: Thieme

An illustrated dictionary of anatomical nomenclature based on Terminologia Anatomica, useful for practical classes, repetitions and practical tests.

5. FIPAT. Terminologia Anatomica. International Anatomical Terminology. Stuttgart, New York: Thieme; 2011
The official anatomical terminology. The reference book in case of any discrepancies regarding the terminology used by various authors.

Supplementary

1. Gilroy AM, MacPherson BR, Ross LM, Schünke M, Schulte E, Schumacher U. Atlas of anatomy. New York: Thieme; 2012
A good and popular anatomical atlas. Our recommendation.
2. Sobotta – Atlas of Human Anatomy or Atlas of Anatomy
There are numerous editions of one of the most popular anatomical atlases worldwide. Editors and publishers are different, but illustrations are the same.
3. Rohen JW, Yokochi C, Lütjen-Drecoll E. Color atlas of anatomy: A photographic study of the human body. Baltimore: Lippincott Williams & Wilkins; 2011
An atlas with photographs of real anatomical specimens.

8. VERIFYING THE EFFECT OF LEARNING

Code of the course effect of learning	Ways of verifying the effect of learning	Completion criterion
A.W1 A.U3, A.U4	**In terms of knowledge:** Theoretical MCQ Test at the end of each semester (single best answer test). **In terms of skills:** Oral check - naming of selected structures with a standardized assessment method described in detail with examples on the e-learning platform of the Department. **In terms of social competences:** prolonged observation by a teacher, clinical problem solving in groups.	30 questions MCQ Test, passing level: 60%

9. ADDITIONAL INFORMATION

(Please write here Information essential for the course instructor that are not included in the other part of the course syllabus, ***particularly the number of acceptable tries for passing a subject (§ 26, § 27 and § 28 of Study Regulations), including exam admission passes****, and e.g. if the course is related to scientific research, detailed description of, information about the Science Club)*

In order to complete each semester of the optional course, a student is required to pass an MCQ test (single best answer) in the e-learning platform. The test will contain 30 questions with a passing level of 60% of correct answers. In each semester a student will have 2 attempts to pass the test.

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.