



DISCIPLINE FILE

Faculty	MEDICINE
Department	PRECLINICAL SCIENCES
Field of study	HEALTHCARE
Study cycle	BACHELOR
Study programme	MEDICINE IN ENGLISH

Discipline`s Name	ANATOMY AND EMBRIOLOGY				
Didactic position, name and surname of the Discipline Coordinator	Ioan Sorin Tudorache, Assoc. Professor, M.D., PhD				
Didactic position, name and surname for the Course Coordinator	Ioan Sorin Tudorache, Assoc. Professor, M.D., PhD				
Didactic position, name and surname for the Coordinator of the Seminar / Laboratory / Clinical Traineeship	Ioan Sorin Tudorache, Assoc. Professor, M.D., PhD				
Discipline Code	MLE.2.3.1	Formative category of the discipline		FS	
Year of Study	II	Semester	3	Type of the final evaluation (E, V)	E3
Discipline Regime (M-mandatory, E-elective)			M	No. of credits	6

No. of Hours per week	6	Out of which are Course hours:	2	Seminar / Practical Activity / Clinical Stage	4
Total of hours in the curriculum	84	Out of which are Course hours:	28	Seminar / Practical Activity / Clinical Stage	56
		Total hours per semester	150	Total hours of individual study	66

Distribution of time pool per week	Hours
1. Study of the course material	3
2. Study according with the course support, manuals	23
3. Study of the minimal bibliography	3
4. Additional documentation in the library	3
5. Specific activity for the seminary or laboratory	4

Distribution of time pool per week	Hours
6. Homework, translations, etc.	1
7. Preparing for different written exams	2
8. Preparing for oral examinations	1
9. Preparing for the final examination	9
10. Consultations	3
11. In the field documentation	0
12. Documentation from web sources, portals, wiki websites	12
13. Tutoring	2
14. Examinations	2
15. Other activities:	0

Course name	ANATOMY AND EMBRIOLOGY
Specific professional competencies	<ul style="list-style-type: none"> • Use of standardized anatomical terminology to describe the abdominopelvic regions and internal organs. • Identification and dissection of abdominal and pelvic anatomical structures, including their embryological development. • Correlation of visceral and vascular anatomy with imaging techniques (ultrasound, CT, MRI) for clinical and diagnostic relevance. • Recognition of anatomical variations and congenital malformations of the digestive, urinary, and reproductive systems. • Application of topographic anatomy knowledge in understanding surgical approaches and interventional procedures.
Transversal competencies	<ul style="list-style-type: none"> • Development of oral communication skills using accurate anatomical and medical terminology during presentations and oral exams. • Strengthening teamwork abilities through collaborative dissection, group projects, and extracurricular anatomy-related activities. • Acquisition of academic integrity and ethical conduct applicable in both preclinical and clinical medical education. • Effective use of modern educational tools (digital atlases, virtual dissection tables, clinical imaging) for visual and functional consolidation of knowledge.
General objectives of the discipline	<ul style="list-style-type: none"> • To achieve a systemic and applied understanding of descriptive, topographic, and clinical anatomy of the abdominal and pelvic regions. • To integrate embryological and morphogenetic concepts in the analysis of structure and function of internal organs. • To develop the ability to correlate classical anatomical knowledge with modern imaging and clinical practice. • To prepare students for identifying and understanding key anatomical elements involved in surgical, gynecological, and urological interventions.
Specific objectives of the discipline	<ul style="list-style-type: none"> • To delimit and identify anatomical regions and structures of the abdomen and pelvis during dissection. • To describe the structural, topographic, and functional anatomy of visceral organs such as the liver, pancreas, kidneys, uterus, and others.

	<ul style="list-style-type: none"> • To explain the embryological development of the digestive, urogenital systems and the abdominal wall, and relate it to congenital pathologies. • To correlate surface anatomical landmarks with organ projections and clinically relevant reference points. • To apply theoretical knowledge in practical sessions through dissection, iconography, and clinical imaging integration.
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Learning Outcomes	
Knowledge	Students identify the anatomical structures of the abdominopelvic region and their spatial relationships using standardized anatomical terminology, describe the structural organization and vascularization of digestive, urinary, and reproductive organs, explain the embryological development of the digestive and urogenital systems and the origin of major congenital malformations.
Skills	Students interpret anatomical structures using cadaveric specimens, anatomical models, and medical imaging techniques, analyze topographic relationships between organs, vessels, and nerves in the abdominopelvic region, evaluate anatomical variations and correlate anatomical structures with clinical and surgical landmarks.
Responsibilities/ Autonomy	Students apply anatomical and embryological knowledge in the interpretation of clinical and imaging findings, use terminology and topographic concepts when presenting and discussing anatomical structures, adhere to ethical and professional standards during dissection activities and collaborative laboratory work.

Course Syllabus	Hours
Course #1 – Abdominal Wall and Peritoneum The anatomical and clinical division of the abdominal wall. Stratigraphy of the abdominal wall. Structure and functions of the peritoneum. Topographic map of the abdominal cavity. The omental space.	2
Course #2 – Development of Serous Membranes and Diaphragm Formation and development of serous membranes. Diaphragm formation. Mesentery, ligaments, and coalescence fascia.	2
Course #3 – Primitive Intestine and Derivatives I Development and differentiation of the primitive gut: proenteron and mezenteron.	2
Course #4 – Primitive Intestine and Derivatives II Development of the metenteron. Overview of associated congenital malformations.	2
Course #5 – Development of the Liver and Pancreatic Systems Formation of the liver, bile ducts, and pancreas. Malformations. Development of the portal venous system and porto-caval anastomoses.	2
Course #6 – General Digestive Tract Structure Macroscopic and microscopic structural organization of the digestive tract.	2
Course #7 – Development of the Urinary System Stages in the embryological development of the urinary tract. Common urinary system malformations.	2

Course Syllabus	Hours
Course #8 – Male Genital System Development Embryogenesis of the male genital tract and associated malformations.	2
Course #9 – Female Genital System Development Embryogenesis of the female genital tract and associated malformations.	2
Course #10 – Retroperitoneal Space and Major Vessels Overview of retroperitoneal anatomy. Anatomy of the abdominal aorta, inferior vena cava, iliac vessels (external and internal), and their junctions.	2
Course #11 – Abdominopelvic Lymphatics Lymphatic drainage of the abdominopelvic cavity. Major nodal groups and pathways.	2
Course #12 – Celiac Region and Vegetative Plexuses Anatomy of the celiac region. Overview of abdominopelvic vegetative (autonomic) plexuses.	2
Course #13 – Topographic Anatomy of the Abdominopelvic Viscera Surface projections of abdominopelvic organs. Clinical significance and location of painful points.	2
Course #14 – Perineal Region and Clinical Imaging Topography of the perineal regions. Clinical anatomy and imaging correlations of the abdominopelvic viscera.	2

Laboratory Syllabus	Hours
Laboratory Work #1 – Abdominal Wall: Structure and Clinical Aspects Structural organization of the abdominal wall. Anatomy of the inguinal canal and areas of reduced resistance. Surface anatomy and clinical implications.	2
Laboratory Work #2 – Peritoneum Anatomical features of the peritoneum: layers, folds, recesses, and compartments.	2
Laboratory Work #3 – Abdominal Esophagus and Stomach Anatomy of the abdominal segment of the esophagus and of the stomach, including vascularization and innervation.	2
Laboratory Work #4 – Omental Bursa and Access Routes Anatomy of the lesser sac (omental bursa) and surgical access routes. Exploration of the celiac trunk and celiac plexus.	2
Laboratory Work #5 – Duodenum Topography, anatomical relations, and clinical importance of the duodenum.	2
Laboratory Work #6 – Pancreas Anatomical structure, location, and major clinical implications of the pancreas.	2
Laboratory Work #7 – Liver and Intrahepatic Bile Ducts Segmental anatomy of the liver and internal organization of the intrahepatic biliary tree.	2
Laboratory Work #8 – Extrahepatic Bile Ducts, Spleen, and Supramesocolic Space Anatomy and imaging correlations of the extrahepatic bile ducts, spleen, and supramesocolic compartment. Clinical significance.	2
Laboratory Work #9 – Colloquium I Formative assessment and synthesis of previously covered topics.	2
Laboratory Work #10 – Mesenteric Intestine and Mesentery Anatomy and spatial relationships of the jejunum, ileum, and their mesentery.	2
Laboratory Work #11 – Cecum and Vermiform Appendix Anatomical features and clinical significance of the cecum and appendix.	2
Laboratory Work #12 – Colon, Mesocolon, and Mesosigmoid Topographic anatomy, structure, and peritoneal relations of the colon and its associated mesenteries.	2

Laboratory Syllabus	Hours
Laboratory Work #13 – Rectum and Inframesocolic Space Anatomy of the rectum and inframesocolic region, with emphasis on sectional anatomy and radiological correlation.	2
Laboratory Work #14 – Kidneys Anatomy, position, and clinical considerations of the kidneys.	2
Laboratory Work #15 – Adrenal Glands and Ureter Topographic anatomy of the adrenal glands and ureters, including surgical and clinical relevance.	2
Laboratory Work #16 – Urinary Bladder and Urethra Anatomical organization and topographical relationships of the urinary bladder and urethra.	2
Laboratory Work #17 – Retroperitoneal Space Anatomy and radiological imaging of the retroperitoneal region. Clinical correlations and surgical importance.	2
Laboratory Work #18 – Colloquium II Formative assessment covering renal, urinary, and digestive systems.	2
Laboratory Work #19 – Ovary and Fallopian Tube Anatomy and spatial relationships of the ovary and uterine (fallopian) tubes.	2
Laboratory Work #20 – Uterus Anatomy and clinical relevance of the uterus, including position, structure, and support.	2
Laboratory Work #21 – Vagina and Obstetric Anatomy Anatomy of the vagina. Obstetric conjugates, pelvimetry, and childbirth-related considerations.	2
Laboratory Work #22 – Scrotum, Testicle, and Sperm Pathways Anatomy of the scrotum, testicles, spermatic cord, and their accessory structures.	2
Laboratory Work #23 – Prostate and Seminal Vesicles Anatomical and functional analysis of the prostate and seminal vesicles. Introduction to the physiology of erection.	2
Laboratory Work #24 – Pelvic Diaphragm and Perineum Anatomy of the pelvic floor, pelvic diaphragm, and the perineal regions.	2
Laboratory Work #25 – Pelvic Space and Imaging Anatomy Sectional anatomy of the pelvis, surface projections, and radiological correlations with clinical interpretation.	2
Laboratory Work #26 – Colloquium III Final formative assessment of the pelvic and urogenital regions.	2
Laboratory Work #27 – Embryology I Introduction to embryological development of the abdominopelvic region: gastrulation, neurulation, and formation of coelomic compartments.	2
Laboratory Work #28 – Embryology II Continuation of embryological development with focus on organogenesis of digestive, urinary, and reproductive systems, and related malformations.	2

Minimum References:

1. Sadler TW. *Langman's Medical Embryology*. 15th ed. Wolters Kluwer; 2023. ISBN: 9781975179960.
2. Drake RL, Vogl AW, Mitchell AWM. *Gray's Anatomy for Students*. 5th ed. Elsevier; 2023. ISBN: 9780323934237.
3. Moore KL, Dalley AF, Agur AMR. *Clinically Oriented Anatomy*. 9th ed. Wolters Kluwer; 2023. ISBN: 9781975154066.

Minimum References:

4. Schünke M, Schulte E, Schumacher U. *Thieme Atlas of Anatomy: Internal Organs. Latin Nomenclature*. 3rd ed. New York: Thieme Medical Publishers; 2021. ISBN: 9781684200825.
5. Netter FH. *Atlas of Human Anatomy: Classic Regional Approach*. 8th ed. Elsevier; 2022. ISBN: 9780323680424.
6. Teaching support materials

Correlation of the contents of the discipline with the expectations of the representatives of the epistemic community, professional associations and representative employers in the health sector

- The development of analytical course and practical work plans was based on current recommendations from medical school curricula across the European Union, as well as on ECTS guidelines concerning preclinical education.
- The content was structured following consultations with experts in clinical anatomy, radiology, and surgery, in order to ensure applied relevance and alignment with current labor market demands in the healthcare system.
- To support interdisciplinary teaching (anatomy – medical imaging – semiology), periodic meetings were held with academic staff from both preclinical and clinical departments, aiming to integrate functional anatomy, clinical palpation, and surgical landmark concepts into the teaching process.

How the information is transmitted

Type of Activity	Teaching methods used
Lecture	<ul style="list-style-type: none"> • Interactive learning based on logical and progressive presentation of content. • Multimedia projection of lecture materials, integrating anatomo-clinical imagery and digital atlases.
Laboratory (Practical Work)	<ul style="list-style-type: none"> • Interactive discussions with emphasis on the clinical applicability of anatomical information. • Classical study through dissection and use of specific teaching materials: skeletal models, 3D anatomical casts, osteological collections, anatomical specimens, and topographic sections. • Practical activity conducted partially on a virtual dissection table, facilitating three-dimensional reconstruction of anatomical structures and the understanding of spatial relationships. • Use of preserved human cadavers for direct identification of anatomical structures. • Presentation of radiological, imaging, and clinical anatomy concepts, correlated with CT, MRI, ultrasound, and anatomical atlas projection. • Practical embryology sessions using histological specimens and interactive digital presentations. • Real-time answers and clarifications provided to students' questions during practical sessions.

Minimal performance standards – the minimum level of activities that need to be fulfilled by the student during the practical works to be accepted to the final laboratory exam:

- Attendance of at least 70% of all practical sessions, with mandatory completion of all missed activities, including absences recorded during mid-semester evaluations.

Minimal performance standards – the minimum level of activities that need to be fulfilled by the student during the practical works to be accepted to the final laboratory exam:

- Completion of thematic assignments to support the understanding of fundamental concepts corresponding to each practical session.
- Identification of basic anatomical structures using a variety of educational materials: skeletal models, osteological collections, anatomical specimens, topographic sections, preserved human cadavers, 3D anatomical casts, as well as classical iconography and medical imaging (X-ray, CT, MRI).
- Active and interactive participation during practical sessions, including responses to the instructor’s questions, involvement in discussions, and application of theoretical knowledge in practice.
- Use of the virtual dissection table to deepen the understanding of three-dimensional topographical relationships and to correlate findings with classical dissection and imaging techniques.
- Exploration and consolidation of taught concepts through projected digital anatomical atlases (e.g., Netter, Thieme) to enhance visual anatomical learning.

Minimum set of activities that must be performed by the student in the practical exam in order to be admitted to the exam (final verification): obtaining an average of 5 in the practical exams of anatomy and embryology

- Attainment of a minimum average grade of 5 (five) in all practical tests and evaluations conducted throughout the semester.
- Demonstrated ability to identify major anatomical structures using various educational tools: anatomical specimens, dissected cadaveric material, 3D anatomical models, and the virtual dissection table.

Specific conditions for carrying out the theoretical and practical activities of the discipline:

- Active participation of the student in lectures and practical sessions, including attendance at demonstrative activities using the virtual dissection table and projected anatomical atlases.
- Successful completion of colloquia and practical-applied examinations in anatomy and embryology, as mandatory stages in the validation of specific competencies.
- Continuous engagement in the learning process through individual study and teamwork, to ensure the assimilation of fundamental knowledge and the ability to establish anatomo-clinical correlations in an interdisciplinary context.

Consideration points for computing the final score:	Percentage share of scoring (Total = 100%)
- Responses to the final exam	60 %
- Responses to the laboratory examination	15 %
- Periodic checks with written exams	10 %
- Continuous testing through the semester	10 %
- Projects / Translations / Posters / Essays, etc.	-
- Other activities:	5 %

Description of the actual methods of examination – E

- The final examination consists of an oral presentation of three topics randomly selected by the student, one from each of the following categories:

<ul style="list-style-type: none"> • Topics from lecture content; • Topics from practical work. <ul style="list-style-type: none"> • All examination topics are published and communicated to students at the beginning of the semester, ensuring effective and transparent preparation. • The exam is conducted in groups of at least three students, in the presence of the course coordinator, the head of practical activities, and the teaching assistant who supervised the group during the semester. • Students are granted thinking time, and the assessment is carried out in a transparent and supportive environment, allowing for coherent and logical articulation of knowledge. • The choice of oral examination is justified by the nature of the medical profession, where verbal communication is essential, and by the need to assess the student's ability to establish anatomo-clinical correlations. 	
Minimal requirements for grade 5 (or how grade 5 is awarded)	Requirements for grade 10 (or how grade 10 is awarded)
<ul style="list-style-type: none"> • Attendance of at least 70% of practical sessions, with mandatory completion of all missed activities. • Completion of all three colloquia during the semester, with a minimum grade of 5 in at least two of them (colloquia may be retaken if failed). • Submission of practical session assignments and demonstration of knowledge of basic concepts. • Achievement of an average grade of 5 in the practical examinations in anatomy and embryology. • Provision of minimally correct answers to the three oral exam topics, demonstrating understanding of the fundamental requirements of the discipline. 	<ul style="list-style-type: none"> • Achievement of an average grade above 9 in all three colloquia during the semester. • An average above 9 in the practical anatomy and embryology examinations, including accurate anatomical identification and anatomo-clinical justification. • Delivery of coherent, complete, and clinically correlated answers to all three oral exam topics, demonstrating advanced competencies and the ability to synthesize and integrate anatomical knowledge.

Date of completion

11.09.2025

Discipline Coordinator,

**Ioan Sorin Tudorache, Assoc. Professor, M.D.,
PhD**

Head of Department,

**Ioan Sorin Tudorache, Assoc. Professor, M.D.,
PhD**

Course Coordinator,

**Ioan Sorin Tudorache, Assoc. Professor, M.D.,
PhD**

Laboratory Coordinator,

**Ioan Sorin Tudorache, Assoc. Professor, M.D.,
PhD**

Department Approval Date

18.09.2025



DISCIPLINE FILE

Faculty	MEDICINE
Department	PRECLINICAL SCIENCES
Field of study	HEALTHCARE
Study cycle	BACHELOR
Study programme	MEDICINE IN ENGLISH

Discipline`s Name	PHYSIOLOGY (I)				
Didactic position, name and surname of the Discipline Coordinator	Munteanu Ioana, Lecturer				
Didactic position, name and surname for the Course Coordinator	Munteanu Ioana, Lecturer				
Didactic position, name and surname for the Coordinator of the Seminar / Laboratory / Clinical Traineeship	Munteanu Ioana, Lecturer				
Discipline Code	MLE.2.3.2	Formative category of the discipline		FS	
Year of Study	II	Semester	3	Type of the final evaluation (E, V)	E3
Discipline Regime (M-mandatory, E-elective)			M	No. of credits	5

No. of Hours per week	4	Out of which are Course hours:	2	Seminar / Practical Activity / Clinical Stage	2
Total of hours in the curriculum	56	Out of which are Course hours:	28	Seminar / Practical Activity / Clinical Stage	28
		Total hours per semester	125	Total hours of individual study	69

Distribution of time pool per week				Hours
1. Study of the course material				3
2. Study according with the course support, manuals				25
3. Study of the minimal bibliography				3
4. Additional documentation in the library				3
5. Specific activity for the seminary or laboratory				2

Distribution of time pool per week	Hours
6. Homework, translations, etc.	1
7. Preparing for different written exams	2
8. Preparing for oral examinations	1
9. Preparing for the final examination	9
10. Consultations	3
11. In the field documentation	0
12. Documentation from web sources, portals, wiki websites	13
13. Tutoring	2
14. Examinations	2
15. Other activities:	0

Course name	PHYSIOLOGY (I)
Specific professional competencies	<ul style="list-style-type: none"> Understand and explain the fundamental physiological mechanisms regulating human body functions in normal and adaptive states. Correlate physiological concepts with clinical signs, symptoms, and diagnostic parameters. Interpret functional tests and physiological data relevant to the cardiovascular, respiratory, digestive, and neuroendocrine systems. Apply knowledge of integrative physiology to understand pathological deviations and therapeutic targets. Demonstrate the ability to use laboratory methods and tools for assessing physiological functions.
Transversal competencies	<ul style="list-style-type: none"> Collaborate effectively within interdisciplinary academic and clinical teams. Communicate scientific information clearly and concisely, both orally and in writing. Develop critical thinking and self-assessment skills related to biomedical knowledge and professional development. Apply ethical principles in data collection, human physiology research, and patient-centered care. Demonstrate adaptability and accountability in problem-solving and decision-making under complex or simulated clinical conditions.
General objectives of the discipline	<ul style="list-style-type: none"> To provide students with a comprehensive understanding of the functional organization of the human body and the physiological principles that govern homeostasis, serving as a foundation for clinical disciplines and medical decision-making.
Specific objectives of the discipline	<ul style="list-style-type: none"> To describe and explain normal physiological functions across major systems (respiratory, cardiovascular, digestive, endocrine, nervous). To analyze how organ systems interact dynamically to maintain homeostasis. To interpret physiological data and measurements from laboratory tests and clinical scenarios. To prepare students for applying physiological concepts in pathology, pharmacology, and clinical rotations.

	<ul style="list-style-type: none"> To develop practical skills for measuring, recording, and evaluating physiological parameters in laboratory and semi-clinical contexts.
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Learning Outcomes	
Knowledge	Students identify the physiological mechanisms regulating respiratory, cardiovascular, digestive, and neuroendocrine systems, describe the functional organization of organ systems and their role in maintaining homeostasis, explain physiological processes involved in gas exchange, cardiac function, vascular regulation, and digestive activity.
Skills	Students interpret physiological data obtained from laboratory investigations such as spirometry, ECG, vascular tests, and digestive function tests, analyze physiological mechanisms underlying respiratory, cardiovascular, and digestive system functions, evaluate physiological parameters and functional test results in relation to normal and altered physiological states.
Responsibilities/ Autonomy	Students apply physiological principles in the interpretation of functional tests and physiological investigations, practice laboratory methods and experimental procedures used in physiological assessment, use scientific reasoning and critical thinking when analyzing physiological data and clinical correlations.

Course Syllabus	Hours
Course #1 – Respiratory Physiology (I) Functional anatomy of the lungs, pleura, and mediastinum. The nasal cavity's role in conditioning inspired air. Ventilation functions of the upper airways. Mechanics of pulmonary ventilation and perfusion. V/Q ratio. Structure and function of the alveolo-capillary membrane. Gas exchange (hematosis). Recap of gas transport mechanisms in the blood.	2
Course #2 – Respiratory Physiology (II) Neuro-humoral regulation of breathing. Central nervous structures involved in respiratory control. The respiratory center: organization and function. Respiratory reflexes. Roles of peripheral and central chemoreceptors. Effects of hyperventilation and hypoventilation. Pathological reflexes affecting respiratory patterns.	2
Course #3 – The Olfactory Analyzer and Phonation Anatomy and physiology of the olfactory system. Mechanisms of phonation.	2
Course #4 – Functional Anatomy of the Myocardium (Part I) Membrane potentials in adult and embryonic heart cells. Myocardial oxygen use and energy metabolism pathways. Functional properties of cardiac tissue.	2
Course #5 – Functional Properties of the Myocardium (Part II) Myocardial contractility and mechanical models of contraction. Myocardial relaxation. Reserve mechanisms of cardiac contractility.	2
Course #6 – The Heart as a Mechanical Pump Phases of the cardiac cycle. Origin of heart sounds. Circulatory and organ-specific blood flow dynamics.	2
Course #7 – The Heart as an Endocrine Organ Natriuretic peptides and their functions. Role of the autonomic nervous system in cardiac regulation. Hormonal influences on heart function.	2

Course Syllabus	Hours
Course #8 – Vascular Component of the Cardiovascular System Vascular anatomy and flow dynamics. Determinants of blood flow. Pulse pressure and its regulation.	2
Course #9 – Blood Pressure Regulation Mechanisms of arterial pressure control: rapid, intermediate, and fluid volume-dependent (renal mechanisms). Functional anatomy of microcirculation and capillary exchanges.	2
Course #10 – Venous and Lymphatic Circulation Physiology of venous return to the heart. Intravascular and extravascular determinants. Venous pressure. Physiology of the lymphatic system.	2
Course #11 – Neuro-Humoral Regulation of Vascular Function Autonomic regulation of vascular tone. Endocrine functions of vascular endothelium. Hormonal and humoral influences on vascular circulation.	2
Course #12 – Physiology of the Oral Cavity Salivary secretion: physical properties, composition, and roles. Mechanisms controlling salivary flow. Taste perception and its physiological basis.	2
Course #13 – Mastication and Reflexes Mechanics of chewing. Mandibular descent reflex and myotatic reflexes. Occlusal rest position. Neural control of chewing. Role of dentition.	2
Course #14 – Swallowing and Visceral Fat Physiology Swallowing: anatomical and functional aspects, esophageal peristalsis, and phases. Neural and hormonal regulation. Visceral-peritoneal fat as an endocrine organ: key cytokines, mechanisms of action, and roles.	2

Laboratory Syllabus	Hours
Laboratory Work #1 – Respiratory Investigations – Spirometry and Pulmonary Function Tests Introduction to spirometry and the exploration of pulmonary function. Assessment of respiratory flow, frequency, volumes, and capacities. Dynamic tests include VEMS, VIMS, and VEMS/VIMS ratio to evaluate thoraco-pulmonary performance.	2
Laboratory Work #2 – Respiratory Investigations – Dead Space and Gas Exchange Analysis Definition and clinical significance of anatomical and functional dead spaces. Tiffeneau index and bronchomotor pharmacological testing. Measurement of oxygen and carbon dioxide using the Orsat apparatus. Evaluation of alkaline reserve and its role in clinical assessment.	2
Laboratory Work #3 – ECG Basics – Cardiac Electrical Activity Overview of the genesis of myocardial electrical currents. Identification of ECG waves, segments, and intervals. Interpretation of the isoelectric line and changes such as sub-leveling and over-leveling.	2
Laboratory Work #4 – ECG Interpretation I – PQ Segment and QRS Complex Analysis of PQ segment changes including WPW syndrome and AV blocks. Evaluation of QRS complex in ventricular hypertrophies. Study of intrinsic deflection, Sokolov-Lyon index, and criteria for diagnosing branch blocks.	2
Laboratory Work #5 – ECG Interpretation II – ST Segment, T Wave, and Myocardial Infarction Investigation of myocardial repolarization, ischemia, and injury. Identification of ST segment and T wave abnormalities. Interpretation of ECG in acute myocardial infarction and evaluation of necrosis and pathological Q waves.	2
Laboratory Work #6 – ECG Application – Practice and Axis Interpretation Hands-on ECG path analysis with emphasis on axis deviation, ventricular depolarization, and intrinsic deflection calculations. Recap of previous sessions through applied interpretation.	2

Laboratory Syllabus	Hours
Laboratory Work #7 – Arterial Circulation – Functional Vascular Testing Definition and measurement of arterial pressure. Functional vascular testing includes the Cold pressor test, posture test, Allen test, oscillometry, and cutaneous thermometry.	2
Laboratory Work #8 – Venous Circulation – Assessment of Venous Function Evaluation of venous pressure and venous valve competence using the Trendelenburg-Troianov test and the three-tourniquet test. Clinical applications in assessing venous return efficiency.	2
Laboratory Work #9 – Capillary Function and Vascular Imaging Introduction to capillaroscopy and the Rumpel-Leede test. Use of Doppler ultrasound to examine blood flow in specific territories. Basics of echocardiography and its clinical parameters.	2
Laboratory Work #10 – Gastric Function – Secretion and Acid Assessment Overview of gastric secretory function and involved cell types. Testing includes basal and stimulated acid secretion, insulin, histamine, and pentagastrin tests. Evaluation of hypo-, hyper-, and anacidity, and diagnostic techniques for occult gastrointestinal bleeding.	2
Laboratory Work #11 – Intestinal Function – Absorption and Fecal Analysis Exploration of protein, carbohydrate, fat, iron, and vitamin B12 absorption through tests like methionine-S35, D-xylose, Fe59, and Schilling. Includes macroscopic, microscopic, chemical, and parasitological examination of feces, with an introduction to endoscopy.	2
Laboratory Work #12 – Pancreatic Function – Exocrine Activity and Enzyme Testing Assessment of exocrine pancreas function via direct and indirect methods. Tests include duodeno-pancreatic tubing, enzyme dosage (amylase, lipase), and steatorrhea measurement. Introduction to radioactive fat absorption tests and scintigraphy of hepatic and pancreatic glands.	2
Laboratory Work #13 – Hepatobiliary Function – Bile and Bilirubin Analysis Investigation of bile production and bilirubin metabolism. Duodenal tube sampling and the Meltzer-Lyon method. Analysis of bile macroscopically and microscopically. Use of bilirubinemia in the classification and diagnosis of jaundice.	2
Laboratory Work #14 – Liver Function Tests – Cytolysis Markers and Review Assessment of hepatic cytolysis through key enzyme markers. Final session dedicated to reviewing and consolidating practical knowledge from all previous sessions.	2

Minimum References:

- Hall JE, Guyton AC. Guyton and Hall Textbook of Medical Physiology. 14th ed. Philadelphia: Elsevier; 2021.
- Costanzo LS. Physiology. 7th ed. Philadelphia: Elsevier; 2023. (part of the "Board Review Series")
- Barrett KE, Barman SM, Brooks HL, Yuan JXJ. Ganong's Review of Medical Physiology. 27th ed. New York: McGraw-Hill Education; 2023.
- Preston RR, Wilson TE. Lippincott Illustrated Reviews: Physiology. 3rd ed. Philadelphia: Wolters Kluwer; 2022.
- Klabunde RE. Cardiovascular Physiology Concepts. 3rd ed. Philadelphia: Wolters Kluwer; 2021.
- Teaching support materials

Correlation of the contents of the discipline with the expectations of the representatives of the epistemic community, professional associations and representative employers in the health sector

- Aligns with current standards set by international physiological and medical science communities (e.g., EFPS, APS).

Correlation of the contents of the discipline with the expectations of the representatives of the epistemic community, professional associations and representative employers in the health sector

- Integrates interdisciplinary knowledge across anatomy, biochemistry, pharmacology, and clinical sciences.
- Supports core competencies required by medical professional bodies and accrediting authorities.
- Prepares students for clinical reasoning and physiological interpretation relevant to diagnosis and treatment.
- Develops transferable skills valued by healthcare employers: critical thinking, data analysis, and scientific communication.

How the information is transmitted

Type of Activity	Teaching methods used
Lecture	<ul style="list-style-type: none">• Systematic and structured presentation of the fundamental mechanisms of human physiology and the functional regulation of major organ systems, delivered through oral exposition and interactive question-and-answer discussions.
Laboratory (Practical Work)	<ul style="list-style-type: none">• Practical activities involving the investigation and assessment of physiological functions using functional tests and experimental methods, with emphasis on data interpretation and clinical correlations.

Minimal performance standards – the minimum level of activities that need to be fulfilled by the student during the practical works to be accepted to the final laboratory exam:

- Attendance of at least 70% of all practical sessions, with mandatory completion of all missed activities, including absences recorded during mid-semester evaluations.
- Completion of thematic assignments to support the understanding of fundamental concepts corresponding to each practical session.
- Identification of basic anatomical structures using a variety of educational materials: skeletal models, osteological collections, anatomical specimens, topographic sections, preserved human cadavers, 3D anatomical casts, as well as classical iconography and medical imaging (X-ray, CT, MRI).
- Active and interactive participation during practical sessions, including responses to the instructor's questions, involvement in discussions, and application of theoretical knowledge in practice.
- Use of the virtual dissection table to deepen the understanding of three-dimensional topographical relationships and to correlate findings with classical dissection and imaging techniques.
- Exploration and consolidation of taught concepts through projected digital anatomical atlases (e.g., Netter, Thieme) to enhance visual anatomical learning.

Minimum set of activities that must be performed by the student in the practical exam in order to be admitted to the exam (final verification): obtaining an average of 5 in the practical exams of anatomy and embryology

- Attainment of a minimum average grade of 5 (five) in all practical tests and evaluations conducted throughout the semester.

- Demonstrated ability to identify major anatomical structures using various educational tools: anatomical specimens, dissected cadaveric material, 3D anatomical models, and the virtual dissection table.

Specific conditions for carrying out the theoretical and practical activities of the discipline:

- Active participation of the student in lectures and practical sessions, including attendance at demonstrative activities using the virtual dissection table and projected anatomical atlases.
- Successful completion of colloquia and practical-applied examinations in anatomy and embryology, as mandatory stages in the validation of specific competencies.
- Continuous engagement in the learning process through individual study and teamwork, to ensure the assimilation of fundamental knowledge and the ability to establish anatomo-clinical correlations in an interdisciplinary context.

Consideration points for computing the final score:	Percentage share of scoring (Total = 100%)
- Responses to the final exam	60 %
- Responses to the laboratory examination	15 %
- Periodic checks with written exams	10 %
- Continuous testing through the semester	10 %
- Projects / Translations / Posters / Essays, etc.	-
- Other activities:	5 %

Description of the actual methods of examination – E

- The final examination consists of an oral presentation of three topics randomly selected by the student, one from each of the following categories:
 - Topics from lecture content;
 - Topics from practical work.
- All examination topics are published and communicated to students at the beginning of the semester, ensuring effective and transparent preparation.
- The exam is conducted in groups of at least three students, in the presence of the course coordinator, the head of practical activities, and the teaching assistant who supervised the group during the semester.
- Students are granted thinking time, and the assessment is carried out in a transparent and supportive environment, allowing for coherent and logical articulation of knowledge.
- The choice of oral examination is justified by the nature of the medical profession, where verbal communication is essential, and by the need to assess the student's ability to establish anatomo-clinical correlations.

Minimal requirements for grade 5 (or how grade 5 is awarded)	Requirements for grade 10 (or how grade 10 is awarded)
<ul style="list-style-type: none"> • Attendance of at least 70% of practical sessions, with mandatory completion of all missed activities. • Completion of all three colloquia during the semester, with a minimum grade of 5 in at least two of them (colloquia may be retaken if failed). 	<ul style="list-style-type: none"> • Achievement of an average grade above 9 in all three colloquia during the semester. • An average above 9 in the practical anatomy and embryology examinations, including accurate anatomical identification and anatomo-clinical justification. • Delivery of coherent, complete, and clinically correlated answers to all three oral exam

<ul style="list-style-type: none"> • Submission of practical session assignments and demonstration of knowledge of basic concepts. • Achievement of an average grade of 5 in the practical examinations in anatomy and embryology. • Provision of minimally correct answers to the three oral exam topics, demonstrating understanding of the fundamental requirements of the discipline. 	<p>topics, demonstrating advanced competencies and the ability to synthesize and integrate anatomical knowledge.</p>
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Date of completion

11.09.2025

Discipline Coordinator,
Munteanu Ioana, Lecturer

Head of Department,
Ioan Sorin Tudorache, Assoc. Professor, M.D.,
PhD

Course Coordinator,
Munteanu Ioana, Lecturer

Laboratory Coordinator,

Munteanu Ioana, Lecturer

Department Approval Date

18.09.2025



DISCIPLINE FILE

Faculty	MEDICINE
Department	PRECLINICAL SCIENCES
Field of study	HEALTHCARE
Study cycle	BACHELOR
Study programme	MEDICINE IN ENGLISH

Discipline`s Name	HISTOLOGY (I)				
Didactic position, name and surname of the Discipline Coordinator	Necula Laura, Assoc.Prof., PhD				
Didactic position, name and surname for the Course Coordinator	Necula Laura, Assoc.Prof., PhD				
Didactic position, name and surname for the Coordinator of the Seminar / Laboratory / Clinical Traineeship	Necula Laura, Assoc.Prof., PhD				
Discipline Code	MLE.2.3.3	Formative category of the discipline		FS	
Year of Study	II	Semester	3	Type of the final evaluation (E, V)	E3
Discipline Regime (M -mandatory, E -elective)			M	No. of credits	5

No. of Hours per week	4	Out of which are Course hours:	2	Seminar / Practical Activity / Clinical Stage	2
Total of hours in the curriculum	56	Out of which are Course hours:	28	Seminar / Practical Activity / Clinical Stage	28
		Total hours per semester	125	Total hours of individual study	69

Distribution of time pool per week	Hours
1. Study of the course material	3
2. Study according with the course support, manuals	25
3. Study of the minimal bibliography	3
4. Additional documentation in the library	3
5. Specific activity for the seminary or laboratory	2

Distribution of time pool per week	Hours
6. Homework, translations, etc.	1
7. Preparing for different written exams	2
8. Preparing for oral examinations	1
9. Preparing for the final examination	9
10. Consultations	3
11. In the field documentation	0
12. Documentation from web sources, portals, wiki websites	13
13. Tutoring	2
14. Examinations	2
15. Other activities:	0

Course name	HISTOLOGY (I)
Specific professional competencies	<ul style="list-style-type: none"> Identify and describe the structural organization of cells, tissues, and organs using light and electron microscopy. Classify the four basic tissue types and correlate their microscopic structure with function. Recognize the histological features of major organ systems and explain their functional implications. Apply histological knowledge to understand normal versus pathological tissue alterations. Demonstrate proficiency in using microscopy techniques and interpreting histological slides in practical sessions.
Transversal competencies	<ul style="list-style-type: none"> Develop precise observational and analytical skills applicable in both academic and clinical settings. Collaborate effectively in laboratory-based learning environments and small-group academic tasks. Communicate scientific information clearly, using appropriate histological terminology. Apply ethical and professional behavior in handling laboratory specimens and collaborative work. Demonstrate critical thinking and self-directed learning in the study of tissue morphology.
General objectives of the discipline	<ul style="list-style-type: none"> To provide students with foundational knowledge of the microscopic structure of human tissues and organs, enabling understanding of their functional organization and preparing them for the study of pathology and clinical applications.
Specific objectives of the discipline	<ul style="list-style-type: none"> To explain the principles and techniques used in histological preparation and microscopic analysis. To identify and describe the morphology and classification of epithelial, connective, muscle, and nervous tissues. To analyze the histological organization of blood and hematopoietic organs. To correlate tissue structure with physiological functions and clinical relevance. To develop skills in slide examination, tissue recognition, and documentation of microscopic findings.

Learning Outcomes	
Knowledge	Students identify the microscopic structure and classification of the four fundamental tissue types: epithelial, connective, muscle, and nervous tissue, describe the cellular components and extracellular structures of tissues using histological terminology, explain the relationship between tissue morphology, physiological function, and the organization of hematopoietic and nervous systems.
Skills	Students interpret histological images and microscopic preparations of tissues using light microscopy, analyze cellular and extracellular structures observed in histological slides and digital atlases, evaluate structural differences between tissues and correlate microscopic features with functional characteristics.
Responsibilities/ Autonomy	Students apply histological knowledge in the interpretation of microscopic structures and tissue organization, practice appropriate microscopy techniques and laboratory procedures during histological analysis, use scientific reasoning and critical observation when examining histological specimens and interpreting microscopic findings.

Course Syllabus	Hours
Course #1 – Introduction to Histology Overview of histology as a scientific discipline. Basic methods of tissue study, including light and electron microscopy. Introduction to the four basic tissue types.	2
Course #2 – Epithelial Tissue – Part 1 General characteristics and classification of epithelial tissues. Discussion of covering and lining epithelia, their functions, and structural adaptations.	2
Course #3 – Epithelial Tissue – Part 2 Glandular epithelium: structure, classification, and modes of secretion. Functional correlations and clinical relevance.	2
Course #4 – Connective Tissue – Part 1 Basic features of connective tissues. Study of connective tissue proper: loose and dense connective tissue, cellular and extracellular components.	2
Course #5 – Connective Tissue – Part 2 Specialized connective tissues including adipose tissue, elastic tissue, and reticular tissue. Structural and functional insights.	2
Course #6 – Ultrastructure of Epithelial and Connective Tissues Electron microscopic details of epithelial and connective tissues. Focus on cell junctions, basement membrane, and ECM components.	2
Course #7 – Cartilaginous Tissue Types of cartilage: hyaline, elastic, and fibrocartilage. Structure, function, and distribution, with emphasis on regenerative capacity and clinical applications.	2
Course #8 – Bone Tissue Histological organization of bone: compact and spongy bone. Osteogenesis, bone cells, and remodeling processes.	2
Course #9 – Verification (Part-Time Examination) Mid-semester knowledge check and review of content from the first eight lectures.	2

Course Syllabus	Hours
Course #10 – Blood Composition and cellular components of blood. Morphology and function of erythrocytes, leukocytes, and platelets.	2
Course #11 – Hematopoietic Structures Bone marrow and lymphoid organs as sites of blood cell formation. Stages of hematopoiesis and regulatory mechanisms.	2
Course #12 – Muscle Tissue Classification of muscle tissue: skeletal, cardiac, and smooth. Structural features, contraction mechanisms, and functional differences.	2
Course #13 – Nervous Tissue Neurons and glial cells: structure and function. Synaptic organization and types of neuroglia in central and peripheral systems.	2
Course #14 – Recap Semester I General review and synthesis of the first semester’s key histological concepts and systems.	2

Laboratory Syllabus	Hours
Laboratory Work #1 – Methods of Making Histological Preparations Introduction to spirometry and the exploration of pulmonary function. Assessment of respiratory flow, frequency, volumes, and capacities. Dynamic tests include VEMS, VIMS, and VEMS/VIMS ratio to evaluate thoraco-pulmonary performance.	2
Laboratory Work #2 – Methods and Instruments Used in the Examination of Histological Preparations Microscopy techniques used in histology, including light and electron microscopy. Handling and adjustment of microscopes, slide analysis basics.	2
Laboratory Work #3 – Epithelial Tissue – 1 Microscopic examination of simple epithelia. Identification of cellular arrangements, polarity, and types of junctions.	2
Laboratory Work #4 – Epithelial Tissue – 2 Observation of stratified and glandular epithelia. Analysis of functional adaptations and morphological features.	2
Laboratory Work #5 – Connective Tissue – 1 Study of loose and dense connective tissues. Identification of fibroblasts, collagen fibers, and ground substance.	2
Laboratory Work #6 – Connective Tissue – 2 Examination of specialized connective tissues such as adipose and reticular tissue. Recognition of histological patterns and staining characteristics.	2
Laboratory Work #7 – Ultrastructure of the Epithelial and Connective Tissue Microscopic and submicroscopic features of epithelia and connective tissues. Emphasis on cell junctions, basement membranes, and extracellular matrix.	2
Laboratory Work #8 – Cartilaginous Tissue Identification of hyaline, elastic, and fibrocartilage. Comparative analysis of cellular and matrix features.	2
Laboratory Work #9 – Bone Tissue Observation of compact and spongy bone. Histological organization, osteon structure, and bone cell identification.	2
Laboratory Work #10 – Blood Microscopic analysis of blood smears. Recognition of blood cell types, morphology, and staining characteristics.	2

Laboratory Syllabus	Hours
Laboratory Work #11 – Hematopoiesis Histological aspects of bone marrow and lymphoid tissues. Identification of developing blood cells and their lineage.	2
Laboratory Work #12 – Muscle Tissue Examination of skeletal, cardiac, and smooth muscle under the microscope. Distinction based on structure, nuclei, and striations.	2
Laboratory Work #13 – Nervous Tissue Study of neurons and glial cells. Observation of nerve fibers, ganglia, and synaptic structures.	2
Laboratory Work #14 – Practical Examination Final evaluation of practical histology knowledge through slide identification and interpretation.	2

Minimum References:
1. Ross MH, Pawlina W. Histology: A Text and Atlas – With Correlated Cell and Molecular Biology. 8th ed. Philadelphia: Wolters Kluwer; 2020.
2. Young B, O'Dowd G, Woodford P. Wheater's Functional Histology: A Text and Colour Atlas. 7th ed. Amsterdam: Elsevier; 2023.
3. Gartner LP, Hiatt JL. Color Textbook of Histology. 5th ed. Philadelphia: Elsevier; 2022.
4. Mescher AL. Junqueira's Basic Histology: Text and Atlas. 16th ed. New York: McGraw-Hill Education; 2021.
5. Stevens A, Lowe JS, Young B. Human Histology. 5th ed. Philadelphia: Elsevier; 2020.
6. Teaching support materials

Correlation of the contents of the discipline with the expectations of the representatives of the epistemic community, professional associations and representative employers in the health sector
<ul style="list-style-type: none"> • The content of the Histology discipline aligns with international academic standards and core medical curricula recommended by leading biomedical education authorities and professional associations. • It ensures integration with complementary disciplines such as anatomy, physiology, and pathology, reflecting a systems-based and clinically relevant approach to tissue-level organization. • The course responds to the expectations of employers and clinical educators by providing students with the necessary microscopic and ultrastructural understanding to interpret normal and pathological changes. • Emphasis is placed on developing fine observational skills, scientific accuracy, and the ability to correlate tissue structure with function — competencies valued in diagnostic fields such as pathology, histopathology, and laboratory medicine. • The practical component trains students in microscopy techniques and tissue identification, aligning with the increasing demand for graduates capable of integrating theoretical knowledge with hands-on diagnostic interpretation.

How the information is transmitted	
Type of Activity	Teaching methods used
Lecture	<ul style="list-style-type: none"> • Systematic and structured presentation of the microscopic organization of cells, tissues and organs, delivered through oral exposition and interactive question-and-answer discussions.
Laboratory (Practical Work)	<ul style="list-style-type: none"> • Practical activities involving the microscopic examination and identification of histological structures on prepared slides, with

How the information is transmitted

emphasis on the correct use of the light microscope and the interpretation of histological features.

Minimal performance standards – the minimum level of activities that need to be fulfilled by the student during the practical works to be accepted to the final laboratory exam:

- Attendance of at least 70% of all practical sessions, with mandatory completion of all missed activities, including absences recorded during mid-semester evaluations.
- Completion of thematic assignments to support the understanding of fundamental concepts corresponding to each practical session.
- Identification of basic anatomical structures using a variety of educational materials: skeletal models, osteological collections, anatomical specimens, topographic sections, preserved human cadavers, 3D anatomical casts, as well as classical iconography and medical imaging (X-ray, CT, MRI).
- Active and interactive participation during practical sessions, including responses to the instructor's questions, involvement in discussions, and application of theoretical knowledge in practice.
- Use of the virtual dissection table to deepen the understanding of three-dimensional topographical relationships and to correlate findings with classical dissection and imaging techniques.
- Exploration and consolidation of taught concepts through projected digital anatomical atlases (e.g., Netter, Thieme) to enhance visual anatomical learning.

Minimum set of activities that must be performed by the student in the practical exam in order to be admitted to the exam (final verification): obtaining an average of 5 in the practical exams of anatomy and embryology

- Attainment of a minimum average grade of 5 (five) in all practical tests and evaluations conducted throughout the semester.
- Demonstrated ability to identify major anatomical structures using various educational tools: anatomical specimens, dissected cadaveric material, 3D anatomical models, and the virtual dissection table.

Specific conditions for carrying out the theoretical and practical activities of the discipline:

- Active participation of the student in lectures and practical sessions, including attendance at demonstrative activities using the virtual dissection table and projected anatomical atlases.
- Successful completion of colloquia and practical-applied examinations in anatomy and embryology, as mandatory stages in the validation of specific competencies.
- Continuous engagement in the learning process through individual study and teamwork, to ensure the assimilation of fundamental knowledge and the ability to establish anatomo-clinical correlations in an interdisciplinary context.

Consideration points for computing the final score:	Percentage share of scoring (Total = 100%)
- Responses to the final exam	60 %
- Responses to the laboratory examination	15 %
- Periodic checks with written exams	10 %
- Continuous testing through the semester	10 %

- Projects / Translations / Posters / Essays, etc.	-
- Other activities:	5 %
Description of the actual methods of examination – E	
<ul style="list-style-type: none"> The final examination consists of an oral presentation of three topics randomly selected by the student, one from each of the following categories: <ul style="list-style-type: none"> Topics from lecture content; Topics from practical work. All examination topics are published and communicated to students at the beginning of the semester, ensuring effective and transparent preparation. The exam is conducted in groups of at least three students, in the presence of the course coordinator, the head of practical activities, and the teaching assistant who supervised the group during the semester. Students are granted thinking time, and the assessment is carried out in a transparent and supportive environment, allowing for coherent and logical articulation of knowledge. The choice of oral examination is justified by the nature of the medical profession, where verbal communication is essential, and by the need to assess the student's ability to establish anatomico-clinical correlations. 	
Minimal requirements for grade 5 (or how grade 5 is awarded)	Requirements for grade 10 (or how grade 10 is awarded)
<ul style="list-style-type: none"> Attendance of at least 70% of practical sessions, with mandatory completion of all missed activities. Completion of all three colloquia during the semester, with a minimum grade of 5 in at least two of them (colloquia may be retaken if failed). Submission of practical session assignments and demonstration of knowledge of basic concepts. Achievement of an average grade of 5 in the practical examinations in anatomy and embryology. Provision of minimally correct answers to the three oral exam topics, demonstrating understanding of the fundamental requirements of the discipline. 	<ul style="list-style-type: none"> Achievement of an average grade above 9 in all three colloquia during the semester. An average above 9 in the practical anatomy and embryology examinations, including accurate anatomical identification and anatomico-clinical justification. Delivery of coherent, complete, and clinically correlated answers to all three oral exam topics, demonstrating advanced competencies and the ability to synthesize and integrate anatomical knowledge.

Date of completion

12.09.2025

Discipline Coordinator,

Necula Laura, Assoc.Prof., PhD

Head of Department,

**Ioan Sorin Tudorache, Assoc. Professor, M.D.,
PhD**

**Course Coordinator,
Necula Laura, Assoc.Prof., PhD**

**Laboratory Coordinator,
Necula Laura, Assoc.Prof., PhD**

**Department Approval Date
18.09.2025**



DISCIPLINE FILE

Faculty	MEDICINE
Department	PRECLINICAL SCIENCES
Field of study	HEALTHCARE
Study cycle	BACHELOR
Study programme	MEDICINE IN ENGLISH

Discipline`s Name	BACTERIOLOGY (I). VIROLOGY				
Didactic position, name and surname of the Discipline Coordinator	Mitache Magdalena, Assoc.Prof., PhD				
Didactic position, name and surname for the Course Coordinator	Mitache Magdalena, Assoc.Prof., PhD				
Didactic position, name and surname for the Coordinator of the Seminar / Laboratory / Clinical Traineeship	Mitache Magdalena, Assoc.Prof., PhD				
Discipline Code	MLE.2.3.4	Formative category of the discipline		FS	
Year of Study	II	Semester	3	Type of the final evaluation (E, V)	E3
Discipline Regime (M -mandatory, E -elective)			M	No. of credits	4

No. of Hours per week	4	Out of which are Course hours:	2	Seminar / Practical Activity / Clinical Stage	2
Total of hours in the curriculum	56	Out of which are Course hours:	28	Seminar / Practical Activity / Clinical Stage	28
		Total hours per semester	100	Total hours of individual study	44

Distribution of time pool per week	Hours
1. Study of the course material	2
2. Study according with the course support, manuals	15
3. Study of the minimal bibliography	2
4. Additional documentation in the library	2
5. Specific activity for the seminary or laboratory	2

Distribution of time pool per week	Hours
6. Homework, translations, etc.	0
7. Preparing for different written exams	1
8. Preparing for oral examinations	0
9. Preparing for the final examination	6
10. Consultations	2
11. In the field documentation	0
12. Documentation from web sources, portals, wiki websites	8
13. Tutoring	2
14. Examinations	2
15. Other activities:	0

Course name	BACTERIOLOGY (I). VIROLOGY
Specific professional competencies	<ul style="list-style-type: none"> • Understanding the structure, classification, and biological properties of bacteria and viruses relevant to human disease. • Identifying mechanisms of microbial pathogenicity and host–microorganism interactions. • Interpreting the principles of antimicrobial therapy, resistance mechanisms, and infection control. • Recognizing the immune responses involved in bacterial and viral infections. • Applying laboratory diagnostic methods used in bacteriology and virology.
Transversal competencies	<ul style="list-style-type: none"> • Development of analytical and critical thinking in interpreting microbiological and virological data. • Effective communication of microbiological concepts in academic and clinical contexts. • Collaboration in laboratory and multidisciplinary healthcare environments. • Demonstration of professional responsibility and adherence to biosafety standards in laboratory practice. • Use of scientific literature and digital resources for evidence-based learning.
General objectives of the discipline	<ul style="list-style-type: none"> • To provide fundamental knowledge regarding bacterial and viral pathogens relevant to human infectious diseases. • To develop understanding of microbial physiology, pathogenic mechanisms, and host immune responses. • To familiarize students with microbiological and virological laboratory diagnostic techniques. • To establish the basis for understanding infectious diseases and their prevention and control.
Specific objectives of the discipline	<ul style="list-style-type: none"> • Identify structural and functional characteristics of bacteria and viruses. • Explain mechanisms of microbial growth, pathogenicity, and antimicrobial resistance. • Understand host immune responses to bacterial and viral infections.

	<ul style="list-style-type: none"> Analyze laboratory diagnostic methods used in bacteriology and virology. Develop practical laboratory skills for microbial identification and infection diagnosis.
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Learning Outcomes	
Knowledge	Students identify structural, physiological, and genetic characteristics of bacteria and viruses, describe mechanisms of microbial pathogenicity, host immune responses, and infection control strategies, explain principles of microbiological and virological diagnostic methods used in clinical laboratories.
Skills	Students interpret microbiological and virological laboratory results obtained through microscopy, culture, serology, and molecular techniques, analyze mechanisms of microbial infection and antimicrobial resistance, evaluate diagnostic strategies used for the detection and identification of bacterial and viral pathogens.
Responsibilities/ Autonomy	Students apply microbiological and virological principles in the interpretation of infectious disease mechanisms, respect biosafety rules and laboratory standards during microbiological investigations, use scientific reasoning and critical thinking when evaluating microbiological data and infection control strategies.

Course Syllabus	Hours
Course #1 – Foundations of Medical Microbiology and Virology Overview of microbiology as a discipline. Historical development and significance in medicine. Classification of microorganisms, including viruses. Introduction to virology: definition, origin theories, structural and replication features of viruses, and modern classification systems.	2
Course #2 – Bacterial Morphology and Physiology Structural organization of bacteria: shape, size, cellular arrangements, and specialized structures (flagella, pili, capsules, spores). Functional aspects of bacterial metabolism, respiration, growth phases, and cultivation. Relevance of physiological traits in clinical microbiology.	2
Course #3 – Physical, Chemical, and Biological Control of Microorganisms Effects of physical agents (heat, radiation, cold) and chemical substances on microbial viability. Concepts of sterilization, disinfection, and antisepsis. Differentiation between bacteriostatic and bactericidal effects. Practical applications in infection control.	2
Course #4 – Bacterial Genetics and Mechanisms of Resistance Structure and function of bacterial genomes, plasmids, mutations, genetic transfer, and recombination. Introduction to bacteriophages. Mechanisms of antimicrobial resistance, including enzymatic inactivation, efflux pumps, and target alteration. Examples from key antibiotic classes.	2
Course #5 – Antimicrobial Agents: Mechanisms and Clinical Applications Classification and origin of antimicrobial substances. Mechanisms of action targeting bacterial cell walls, protein synthesis, and nucleic acids. Focus on beta-lactams, aminoglycosides, and quinolones. Clinical indications and resistance implications.	2
Course #6 – Host-Microorganism Interactions and Pathogenesis Normal microbiota and its physiological roles. Concepts of colonization, infection, and disease.	2

Course Syllabus	Hours
Virulence factors: adhesins, invasins, toxins (exotoxins and endotoxins), and immune evasion strategies. Host susceptibility and determinants of pathogenicity.	
Course #7 – Introduction to Immunity: Innate and Adaptive Defense Mechanisms Overview of natural (non-specific) immunity: physical barriers, phagocytosis, complement system, and inflammation. Introduction to acquired immunity: active vs. passive forms, primary and secondary responses, and immunological memory.	2
Course #8 – Organization of the Immune System and Antigens Central and peripheral lymphoid organs. Immune cell types: lymphocytes, antigen-presenting cells, and accessory cells. Concepts of antigenicity and immunogenicity. Structural properties of antigens and their immunological significance.	2
Course #9 – Antibodies and Immune Responses Structure and classification of immunoglobulins. Mechanisms of humoral and cell-mediated immune responses. Cytokine roles, receptor interactions, and antigen processing. Applications in diagnosis and therapy.	2
Course #10 – Antigen-Antibody Reactions and Diagnostic Applications Principles of antigen-antibody interactions. Types of serological reactions: precipitation, agglutination, neutralization, and ELISA. Laboratory applications in infectious disease diagnosis and immunological assessment.	2
Course #11 – Hypersensitivity Reactions and Immune Pathology Classification of hypersensitivity types I–IV. Mechanisms of immune overreaction, clinical manifestations, and laboratory diagnosis. Medical relevance in allergy, autoimmune disease, and transplant rejection.	2
Course #12 – Immune Responses to Viral Infections and Vaccines Innate and adaptive immune responses against viruses. Interferon mechanisms and cytotoxic responses. Principles and types of antiviral vaccines (live, inactivated, mRNA). Immunization strategies and global health impact.	2
Course #13 – Medically Important Viruses: Respiratory and Neurotropic Infections Orthomyxoviruses (Influenza A, B, C): classification, transmission, and vaccine development. Paramyxoviruses (measles, mumps, RSV). Neurotropic viruses: causative agents of meningitis, encephalitis, and their neuropathological implications.	2
Course #14 – Systemic Viral Infections: Herpesviridae, Hepatitis Viruses, and HIV Herpesviridae family: HSV-1, HSV-2, VZV, EBV, CMV, HHV-6/7/8. Hepatitis A, B, C, and D: virology, transmission, clinical features, and prevention. HIV/AIDS pathogenesis and immune compromise. Oncogenic viruses and their roles in human malignancies.	2

Laboratory Syllabus	Hours
Laboratory Work #1 – Structure, Safety, and Workflow in the Microbiology Laboratory Organization of the microbiology laboratory, essential equipment, safety measures, and contamination control. Overview of diagnostic workflows in bacteriology and virology, including the use of cell cultures in viral detection.	2
Laboratory Work #2 – Sterilization, Disinfection, and Contamination Control Principles and procedures of sterilization and disinfection. Physical and chemical methods, sterilization validation, and contamination prevention strategies in clinical laboratories.	2
Laboratory Work #3 – Clinical Sample Collection and Handling Proper techniques for collecting, transporting, and processing clinical samples. Part I: respiratory tract specimens and general guidelines. Part II: hemocultures, CSF, urine, genital, digestive, skin, subcutaneous, and ocular samples.	2

Laboratory Syllabus	Hours
<p>Laboratory Work #4 – Microscopy and Staining Techniques Introduction to optical microscopy. Preparation of native and stained smears. Application of methylene blue, Gram stain, and Ziehl-Neelsen methods for bacterial visualization and interpretation of clinical samples.</p>	2
<p>Laboratory Work #5 – Culture Media and Microbial Cultivation Techniques Classification and use of culture media. Standard inoculation and cultivation procedures. Observation of colony morphology, hemolysis, pigment production, and interpretation of growth patterns.</p>	2
<p>Laboratory Work #6 – Bacterial Biochemical Identification Methods Principles and application of biochemical tests for bacterial identification. Use of multitest and chromogenic media. Differentiation of species based on metabolic characteristics.</p>	2
<p>Laboratory Work #7 – Antigenic, Serological, and Molecular Identification of Bacteria Overview of bacterial antigen-based identification and serological methods. Introduction to molecular biology techniques in microbial diagnostics.</p>	2
<p>Laboratory Work #8 – Antibiotic Susceptibility Testing and Interpretation Evaluation of bacterial resistance using diffusion, dilution, and E-Test methods. Interpretation of antibiotic susceptibility profiles and NEI/NEB values in clinical practice.</p>	2
<p>Laboratory Work #9 – Diagnostic Algorithms in Virology Overview of virological diagnostic strategies, including antigen detection, PCR, viral culture, and the use of cell lines for viral replication studies.</p>	2
<p>Laboratory Work #10 – Serological and Molecular Diagnosis of Viral Infections Direct and indirect diagnostic methods: ELISA, PCR, neutralization tests, and antibody titration. Applications in detecting viral antigens and host immune responses.</p>	2
<p>Laboratory Work #11 – Laboratory Diagnosis of Respiratory Viral Infections Sample processing and detection of viruses such as influenza and RSV. Use of rapid antigen tests, molecular techniques, and viral cultures in respiratory virology.</p>	2
<p>Laboratory Work #12 – Laboratory Diagnosis of Herpesvirus Infections Detection of HSV, VZV, CMV, and other human herpesviruses. Use of direct immunofluorescence, PCR, and serological assays in clinical diagnostics.</p>	2
<p>Laboratory Work #13 – Laboratory Diagnosis of CNS and Systemic Viral Infections Techniques for detecting neurotropic viruses in cerebrospinal fluid. Diagnostic approaches in viral meningitis and encephalitis. Interpretation of markers in viral hepatitis (A, B, C, D).</p>	2
<p>Laboratory Work #14 – HIV/AIDS Laboratory Diagnosis and Final Practical Assessment Screening and confirmatory tests for HIV infection: ELISA, Western blot, PCR, and CD4+ monitoring. Final evaluation of practical skills and theoretical knowledge acquired during the laboratory course.</p>	2

Minimum References:
1. Murray PR, Rosenthal KS, Pfaller MA. Medical microbiology . 9th ed. Philadelphia: Elsevier; 2020.
2. Brooks GF, Carroll KC, Butel JS, Morse SA, Mietzner TA. Jawetz, Melnick & Adelberg's medical microbiology . 28th ed. New York: McGraw-Hill Education; 2023.
3. Tortora GJ, Funke BR, Case CL. Microbiology: an introduction . 13th ed. Hoboken (NJ): Wiley; 2020.
4. Knipe DM, Howley PM, editors. Fields virology . 7th ed. Philadelphia: Wolters Kluwer; 2020.
5. Teaching support materials

Correlation of the contents of the discipline with the expectations of the representatives of the epistemic community, professional associations and representative employers in the health sector

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How the information is transmitted

Type of Activity	Teaching methods used
Lecture	<ul style="list-style-type: none">• Systematic and structured presentation of the fundamental principles of bacteriology and virology, focusing on the structure, classification, pathogenic mechanisms, and host–microorganism interactions of clinically relevant bacteria and viruses, delivered through oral exposition and interactive question-and-answer discussions.
Laboratory (Practical Work)	<ul style="list-style-type: none">• Practical activities involving the observation, identification, and analysis of microorganisms using microbiological techniques and laboratory methods, with emphasis on the interpretation of laboratory results and their clinical relevance.

Minimal performance standards – the minimum level of activities that need to be fulfilled by the student during the practical works to be accepted to the final laboratory exam:

- Attendance of at least 70% of all practical sessions, with mandatory completion of all missed activities, including absences recorded during mid-semester evaluations.
- Completion of thematic assignments to support the understanding of fundamental concepts corresponding to each practical session.
- Identification of basic anatomical structures using a variety of educational materials: skeletal models, osteological collections, anatomical specimens, topographic sections, preserved human cadavers, 3D anatomical casts, as well as classical iconography and medical imaging (X-ray, CT, MRI).
- Active and interactive participation during practical sessions, including responses to the instructor’s questions, involvement in discussions, and application of theoretical knowledge in practice.
- Use of the virtual dissection table to deepen the understanding of three-dimensional topographical relationships and to correlate findings with classical dissection and imaging techniques.
- Exploration and consolidation of taught concepts through projected digital anatomical atlases (e.g., Netter, Thieme) to enhance visual anatomical learning.

Minimum set of activities that must be performed by the student in the practical exam in order to be admitted to the exam (final verification): obtaining an average of 5 in the practical exams of anatomy and embryology

- Attainment of a minimum average grade of 5 (five) in all practical tests and evaluations conducted throughout the semester.
- Demonstrated ability to identify major anatomical structures using various educational tools: anatomical specimens, dissected cadaveric material, 3D anatomical models, and the virtual dissection table.

Specific conditions for carrying out the theoretical and practical activities of the discipline:

- Active participation of the student in lectures and practical sessions, including attendance at demonstrative activities using the virtual dissection table and projected anatomical atlases.
- Successful completion of colloquia and practical-applied examinations in anatomy and embryology, as mandatory stages in the validation of specific competencies.
- Continuous engagement in the learning process through individual study and teamwork, to ensure the assimilation of fundamental knowledge and the ability to establish anatomo-clinical correlations in an interdisciplinary context.

Consideration points for computing the final score:	Percentage share of scoring (Total = 100%)
- Responses to the final exam	60 %
- Responses to the laboratory examination	15 %
- Periodic checks with written exams	10 %
- Continuous testing through the semester	10 %
- Projects / Translations / Posters / Essays, etc.	-
- Other activities:	5 %

Description of the actual methods of examination – E

- The final examination consists of an oral presentation of three topics randomly selected by the student, one from each of the following categories:
 - Topics from lecture content;
 - Topics from practical work.
- All examination topics are published and communicated to students at the beginning of the semester, ensuring effective and transparent preparation.
- The exam is conducted in groups of at least three students, in the presence of the course coordinator, the head of practical activities, and the teaching assistant who supervised the group during the semester.
- Students are granted thinking time, and the assessment is carried out in a transparent and supportive environment, allowing for coherent and logical articulation of knowledge.
- The choice of oral examination is justified by the nature of the medical profession, where verbal communication is essential, and by the need to assess the student's ability to establish anatomo-clinical correlations.

Minimal requirements for grade 5 (or how grade 5 is awarded)	Requirements for grade 10 (or how grade 10 is awarded)
<ul style="list-style-type: none"> • Attendance of at least 70% of practical sessions, with mandatory completion of all missed activities. • Completion of all three colloquia during the semester, with a minimum grade of 5 in at least two of them (colloquia may be retaken if failed). • Submission of practical session assignments and demonstration of knowledge of basic concepts. • Achievement of an average grade of 5 in the practical examinations in anatomy and embryology. 	<ul style="list-style-type: none"> • Achievement of an average grade above 9 in all three colloquia during the semester. • An average above 9 in the practical anatomy and embryology examinations, including accurate anatomical identification and anatomo-clinical justification. • Delivery of coherent, complete, and clinically correlated answers to all three oral exam topics, demonstrating advanced competencies and the ability to synthesize and integrate anatomical knowledge.

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| <ul style="list-style-type: none">• Provision of minimally correct answers to the three oral exam topics, demonstrating understanding of the fundamental requirements of the discipline. | |
|--|--|

Date of completion

12.09.2025

**Discipline Coordinator,
Mitache Magdalena, Assoc.Prof., PhD**

Head of Department,

**Ioan Sorin Tudorache, Assoc. Professor, M.D.,
PhD**

**Course Coordinator,
Mitache Magdalena, Assoc.Prof., PhD**

**Laboratory Coordinator,
Mitache Magdalena, Assoc.Prof., PhD**

Department Approval Date

18.09.2025



DISCIPLINE FILE

Faculty	MEDICINE
Department	PRECLINICAL SCIENCES
Field of study	HEALTHCARE
Study cycle	BACHELOR
Study programme	MEDICINE IN ENGLISH

Discipline`s Name	BEHAVIOURAL SCIENCES, PSYCHOLOGY AND MEDICAL SOCIOLOGY				
Didactic position, name and surname of the Discipline Coordinator	Bondar Andrei, Lecturer				
Didactic position, name and surname for the Course Coordinator	Bondar Andrei, Lecturer				
Didactic position, name and surname for the Coordinator of the Seminar / Laboratory / Clinical Traineeship	Bondar Andrei, Lecturer				
Discipline Code	MLE.2.3.4	Formative category of the discipline		CS	
Year of Study	II	Semester	3	Type of the final evaluation (E, V)	E3
Discipline Regime (M -mandatory, E -elective)			M	No. of credits	4

No. of Hours per week	4	Out of which are Course hours:	2	Seminar / Practical Activity / Clinical Stage	2
Total of hours in the curriculum	56	Out of which are Course hours:	28	Seminar / Practical Activity / Clinical Stage	28
		Total hours per semester	100	Total hours of individual study	44

Distribution of time pool per week				Hours
1. Study of the course material				2
2. Study according with the course support, manuals				15
3. Study of the minimal bibliography				2
4. Additional documentation in the library				2
5. Specific activity for the seminary or laboratory				2

Distribution of time pool per week	Hours
6. Homework, translations, etc.	0
7. Preparing for different written exams	1
8. Preparing for oral examinations	0
9. Preparing for the final examination	6
10. Consultations	2
11. In the field documentation	0
12. Documentation from web sources, portals, wiki websites	8
13. Tutoring	2
14. Examinations	2
15. Other activities:	0

Course name	BEHAVIOURAL SCIENCES, PSYCHOLOGY AND MEDICAL SOCIOLOGY
Specific professional competencies	<ul style="list-style-type: none"> • Understanding the biological, psychological, and social determinants of human behavior. • Identifying behavioral patterns and psychosocial factors influencing health and disease. • Interpreting the psychological mechanisms involved in stress, coping, personality development, and psychosomatic disorders. • Recognizing behavioral and social influences on patient health, treatment adherence, and doctor–patient relationships. • Applying concepts of behavioral sciences and medical sociology to the analysis of health-related behaviors.
Transversal competencies	<ul style="list-style-type: none"> • Development of analytical and critical thinking in the interpretation of behavioral and psychosocial phenomena. • Effective communication and interpersonal interaction in clinical and healthcare environments. • Collaboration within multidisciplinary healthcare teams addressing psychosocial aspects of patient care. • Demonstration of empathy, ethical responsibility, and respect for patient autonomy and dignity. • Use of scientific resources and evidence-based approaches in behavioral and social medicine.
General objectives of the discipline	<ul style="list-style-type: none"> • To provide fundamental knowledge regarding behavioral sciences, psychology, and medical sociology in healthcare. • To develop understanding of the interaction between biological, psychological, and social factors in health and disease. • To familiarize students with psychosocial determinants of health behavior and illness. • To promote patient-centered care through the integration of psychological and social perspectives in medicine.
Specific objectives of the discipline	<ul style="list-style-type: none"> • Identify the biological, psychological, and social determinants of human behavior. • Explain mechanisms of stress, coping strategies, and psychological defense mechanisms. • Understand personality structures and behavioral patterns influencing health and disease.

	<ul style="list-style-type: none"> Analyze psychosomatic relationships and behavioral responses to illness. Develop communication and interpersonal skills relevant to the doctor–patient relationship.
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Learning Outcomes	
Knowledge	Students identify biological, psychological, and social determinants influencing human behavior and health, describe the mechanisms of stress, coping, personality development, and psychosomatic interactions, explain the influence of behavioral and social factors on health, illness perception, and patient compliance.
Skills	Students interpret behavioral patterns and psychosocial factors influencing health and disease, analyze psychological responses to illness and patient behavior in clinical contexts, evaluate communication strategies and psychosocial interventions used in patient care.
Responsibilities/ Autonomy	Students apply principles of behavioral sciences and medical sociology in patient-centered medical practice, use effective communication and empathetic interaction in doctor–patient relationships, adhere to ethical and professional standards when addressing psychosocial aspects of health and illness.

Course Syllabus	Hours
Course #1 – Introduction to Human Behavioral Sciences Overview of the interdisciplinary study of human behavior. Exploration of the biological, psychological, and social factors that interact to shape individual and group behavior.	2
Course #2 – Biological Determinants of Behavior – Genetic Factors Discussion on the role of genetics in behavior. Key genetic study methods, heritability of psychiatric disorders, and approaches to assessing genetic risk.	2
Course #3 – Biological Determinants of Behavior – Neuroanatomical Factors Historical and modern insights into brain-behavior relationships. Analysis of cerebral lobes and the limbic system in relation to cognitive and emotional functions, including the case of Phineas Gage	2
Course #4 – Biological Determinants of Behavior – Neurotransmitters I Behavioral implications of serotonin and noradrenaline systems. Their roles in mood regulation, anxiety, and behavioral control.	2
Course #5 – Biological Determinants of Behavior – Neurotransmitters II Examination of the dopaminergic system and other neurotransmitters (GABA, acetylcholine, glutamate) in the modulation of behavior and psychiatric disorders.	2
Course #6 – Biological Determinants of Behavior – Endocrine and Chronobiological Factors Impact of hormonal systems, particularly the HPA axis, on behavior. Influence of biological rhythms on emotional and cognitive functioning.	2
Course #7 – Psychological Determinants – Normal Personality Exploration of typological models of personality and their behavioral implications. Understanding healthy personality structure.	2

Course Syllabus	Hours
Course #8 – Psychological Determinants – Pathological Personality Concept and classification of abnormal personality patterns. Overview of personality types associated with maladaptive behavior.	2
Course #9 – Personality Disorders Typology and diagnostic criteria for personality disorders based on international classification systems. Behavioral manifestations and clinical significance.	2
Course #10 – Psychological Defense Mechanisms Understanding unconscious strategies for coping with stress and emotional conflict. Overview of major defense mechanisms and their adaptive or maladaptive roles.	2
Course #11 – Psychosocial Stress and Coping Etiopathogenesis of stress. Classification and impact of stressors. Analysis of coping styles and mechanisms used to manage psychosocial stress.	2
Course #12 – Specific Behavioral Patterns – Sexual, Dietary, Addictive, and Aggressive Bio-psycho-social model applied to key behavioral patterns: sexual behavior, eating habits, substance use, and aggression.	2
Course #13 – Human Behavior in Illness Psychosomatic relationships, behavioral consequences of illness, and patient responsiveness to therapy. The roles of placebo and nocebo effects.	2
Course #14 – Social and Ethical Regulation of Behavior Social influences on behavior through ethical, legal, and cultural frameworks. Topics include bioethics, euthanasia, malpractice, and medical codes of ethics.	2

Laboratory Syllabus	Hours
Laboratory Work #1 – Health Perception and Psych behavioral Risk Assessment Theoretical discussion on health status, immunogenic personality traits, and psychogenic risk factors for disease. Practical activities include self-assessment questionnaires focused on health attitudes, resilience traits (optimism, robustness), and consumption behaviors (alcohol, tobacco).	2
Laboratory Work #2 – Psychic Factors in Pathogenesis and Functional Disorders Exploration of explanatory models for the psychic role in disease (Engel, Fisher, Contrada), and the impact of conditioned reflexes. Functional disorders are assessed using tools like the polygraph, GBB-24 questionnaire, Dongier’s table, and HAD scale.	2
Laboratory Work #3 – Stress and Coping Mechanisms Analysis of stress classification, control locus, coping strategies, and the influence of social support. Practical exercises involve completing the Columbia University stress questionnaire and a tool for evaluating social support networks.	2
Laboratory Work #4 – Anti-Stress Strategies and Sanogenic Factors Principles of anti-stress behavior, and the therapeutic value of humor and music. Students explore anti-stress programs like New Start and behavioral therapy approaches, including smoking cessation strategies.	2
Laboratory Work #5 – Understanding Disease Experience and Quality of Life Conceptual exploration of disease definitions and Leriche’s three hypostases. The consultation circuit and patient reluctance are discussed alongside quality-of-life indices. Activities include recorded patient interviews and use of the MOS-36 and Juniper QOL instruments.	2
Laboratory Work #6 – Communication in the Doctor–Patient Relationship Study of verbal and non-verbal communication, and question types in clinical settings. Practical components involve MMPI test scales and interviews demonstrating open, closed, and suggestive questioning during anamnesis.	2

Laboratory Syllabus	Hours
Laboratory Work #7 – Psychosomatic Disorders and the Integrative Approach Definitions and classification of psychosomatic and somatopsychic disorders. Students apply tools like the Type A personality assessment, Maastricht burnout questionnaire, and algorithms for identifying psychogenic components in disease.	2
Laboratory Work #8 – Supportive Psychotherapy in Family Medicine Theoretical principles and practical application of supportive psychotherapy by family doctors. Activities include Schultz autogenic training, psychosomatic training (Luban-Plozza), and group therapy principles.	2
Laboratory Work #9 – Types of Listening and Musical Somatization Discussion on listening types and abstract-concrete isomorphism in patient interaction. The Musicotest W is used to explore how music influences somatic responses.	2
Laboratory Work #10 – Music Therapy – Selection and Impact Guidelines for choosing therapeutic music and understanding its psychological effects. The Musicotest 2 (BBSS) is used for practical analysis of musical structure and patient response.	2
Laboratory Work #11 – Psychological Aspects of Drug Use and Compliance Psychological challenges related to drug use, including dependence, placebo effect, and therapeutic compliance. Students complete compliance questionnaires and review interviews with corticoddependent patients.	2
Laboratory Work #12 – Sexual and Couple Dynamics in Psychosomatics Exploration of psychological causes of sexual dysfunction and relationship issues with psychosomatic consequences. Practical tools include the Comatorean Văleanu-Daniel questionnaire and couple dynamics assessments.	2
Laboratory Work #13 – Psychosomatic Challenges in the Elderly Investigation of the psychological and somatic interplay in aging populations. Tools include the Mini-Mental State Examination and the Iamandescu-Popa-Velea questionnaire on longevity and psychogenic factors.	2
Laboratory Work #14 – Psychosomatic Care Models and Medical Student Integration Final session on integrating future doctors into the psychological care of psychosomatic patients. Focus on the Monte Verità model as a holistic framework for psychosomatic patient support.	2

Minimum References:
1. Taylor SE. Health psychology . 10th ed. New York: McGraw-Hill Education; 2021.
2. Cockerham WC. Medical sociology . 14th ed. London: Routledge; 2021.
3. Christie D, Viner R. ABC of behavioural science . 2nd ed. Hoboken (NJ): Wiley-Blackwell; 2020.
4. Ogden J. Health psychology: a textbook . 5th ed. London: Routledge; 2023.
5. Teaching support materials

Correlation of the contents of the discipline with the expectations of the representatives of the epistemic community, professional associations and representative employers in the health sector
•

How the information is transmitted	
Type of Activity	Teaching methods used
Lecture	<ul style="list-style-type: none"> Systematic and structured presentation of the fundamental concepts of behavioural sciences, psychology, and medical sociology, focusing on the psychological, social, and behavioural

How the information is transmitted	
	determinants of health and disease, delivered through oral exposition and interactive question-and-answer discussions.
Laboratory (Practical Work)	<ul style="list-style-type: none"> Practical activities focused on the analysis of behavioural and psychosocial factors influencing health, including discussion of case scenarios and application of communication and psychosocial assessment skills in medical contexts.

Minimal performance standards – the minimum level of activities that need to be fulfilled by the student during the practical works to be accepted to the final laboratory exam:
<ul style="list-style-type: none"> Attendance of at least 70% of all practical sessions, with mandatory completion of all missed activities, including absences recorded during mid-semester evaluations. Completion of thematic assignments to support the understanding of fundamental concepts corresponding to each practical session. Identification of basic anatomical structures using a variety of educational materials: skeletal models, osteological collections, anatomical specimens, topographic sections, preserved human cadavers, 3D anatomical casts, as well as classical iconography and medical imaging (X-ray, CT, MRI). Active and interactive participation during practical sessions, including responses to the instructor's questions, involvement in discussions, and application of theoretical knowledge in practice. Use of the virtual dissection table to deepen the understanding of three-dimensional topographical relationships and to correlate findings with classical dissection and imaging techniques. Exploration and consolidation of taught concepts through projected digital anatomical atlases (e.g., Netter, Thieme) to enhance visual anatomical learning.

Minimum set of activities that must be performed by the student in the practical exam in order to be admitted to the exam (final verification): obtaining an average of 5 in the practical exams of anatomy and embryology
<ul style="list-style-type: none"> Attainment of a minimum average grade of 5 (five) in all practical tests and evaluations conducted throughout the semester. Demonstrated ability to identify major anatomical structures using various educational tools: anatomical specimens, dissected cadaveric material, 3D anatomical models, and the virtual dissection table.

Specific conditions for carrying out the theoretical and practical activities of the discipline:
<ul style="list-style-type: none"> Active participation of the student in lectures and practical sessions, including attendance at demonstrative activities using the virtual dissection table and projected anatomical atlases. Successful completion of colloquia and practical-applied examinations in anatomy and embryology, as mandatory stages in the validation of specific competencies. Continuous engagement in the learning process through individual study and teamwork, to ensure the assimilation of fundamental knowledge and the ability to establish anatomo-clinical correlations in an interdisciplinary context.

Consideration points for computing the final score:	Percentage share of scoring (Total = 100%)
- Responses to the final exam	60 %
- Responses to the laboratory examination	15 %
- Periodic checks with written exams	10 %

- Continuous testing through the semester	10 %
- Projects / Translations / Posters / Essays, etc.	-
- Other activities:	5 %
Description of the actual methods of examination – E	
<ul style="list-style-type: none"> The final examination consists of an oral presentation of three topics randomly selected by the student, one from each of the following categories: <ul style="list-style-type: none"> Topics from lecture content; Topics from practical work. All examination topics are published and communicated to students at the beginning of the semester, ensuring effective and transparent preparation. The exam is conducted in groups of at least three students, in the presence of the course coordinator, the head of practical activities, and the teaching assistant who supervised the group during the semester. Students are granted thinking time, and the assessment is carried out in a transparent and supportive environment, allowing for coherent and logical articulation of knowledge. The choice of oral examination is justified by the nature of the medical profession, where verbal communication is essential, and by the need to assess the student's ability to establish anatomico-clinical correlations. 	
Minimal requirements for grade 5 (or how grade 5 is awarded)	Requirements for grade 10 (or how grade 10 is awarded)
<ul style="list-style-type: none"> Attendance of at least 70% of practical sessions, with mandatory completion of all missed activities. Completion of all three colloquia during the semester, with a minimum grade of 5 in at least two of them (colloquia may be retaken if failed). Submission of practical session assignments and demonstration of knowledge of basic concepts. Achievement of an average grade of 5 in the practical examinations in anatomy and embryology. Provision of minimally correct answers to the three oral exam topics, demonstrating understanding of the fundamental requirements of the discipline. 	<ul style="list-style-type: none"> Achievement of an average grade above 9 in all three colloquia during the semester. An average above 9 in the practical anatomy and embryology examinations, including accurate anatomical identification and anatomico-clinical justification. Delivery of coherent, complete, and clinically correlated answers to all three oral exam topics, demonstrating advanced competencies and the ability to synthesize and integrate anatomical knowledge.

Date of completion

12.09.2025

**Discipline Coordinator,
Bondar Andrei, Lecturer**

Head of Department,

**Ioan Sorin Tudorache, Assoc. Professor, M.D.,
PhD**

**Course Coordinator,
Bondar Andrei, Lecturer**

**Laboratory Coordinator,
Bondar Andrei, Lecturer**

Department Approval Date
18.09.2025



DISCIPLINE FILE

Faculty	MEDICINE
Department	PRECLINICAL SCIENCES
Field of study	HEALTHCARE
Study cycle	BACHELOR
Study programme	MEDICINE IN ENGLISH

Discipline`s Name	PRIMARY HEALTH CARE				
Didactic position, name and surname of the Discipline Coordinator	Muşat Simona, Lecturer				
Didactic position, name and surname for the Course Coordinator	Muşat Simona, Lecturer				
Didactic position, name and surname for the Coordinator of the Seminar / Laboratory / Clinical Traineeship	Muşat Simona, Lecturer				
Discipline Code	MLE.2.3.4	Formative category of the discipline		DS	
Year of Study	II	Semester	3	Type of the final evaluation (E, V)	E3
Discipline Regime (M-mandatory, E-elective)			M	No. of credits	3

No. of Hours per week	4	Out of which are Course hours:	1	Seminar / Practical Activity / Clinical Stage	2
Total of hours in the curriculum	42	Out of which are Course hours:	14	Seminar / Practical Activity / Clinical Stage	28
		Total hours per semester	75	Total hours of individual study	33

Distribution of time pool per week	Hours
1. Study of the course material	1
2. Study according with the course support, manuals	11
3. Study of the minimal bibliography	1
4. Additional documentation in the library	1
5. Specific activity for the seminary or laboratory	2

Distribution of time pool per week	Hours
6. Homework, translations, etc.	0
7. Preparing for different written exams	1
8. Preparing for oral examinations	0
9. Preparing for the final examination	4
10. Consultations	1
11. In the field documentation	0
12. Documentation from web sources, portals, wiki websites	5
13. Tutoring	2
14. Examinations	2
15. Other activities:	0

Course name	PRIMARY HEALTH CARE
Specific professional competencies	<ul style="list-style-type: none"> • Understanding the principles, organization, and functions of primary health care and family medicine. • Identifying preventive strategies, screening programs, and health promotion activities in community healthcare. • Interpreting clinical and epidemiological data relevant to chronic disease management in primary care. • Recognizing the role of the family physician in patient monitoring, preventive medicine, and community health supervision. • Applying basic principles of patient-centered care and integrated medical and social support in primary healthcare.
Transversal competencies	<ul style="list-style-type: none"> • Development of communication and counseling skills in patient–physician interactions. • Promotion of teamwork and collaboration within multidisciplinary healthcare teams. • Demonstration of ethical behavior, professional responsibility, and respect for patient rights. • Ability to analyze public health problems and preventive strategies at community level. • Use of scientific resources and digital tools for evidence-based decision-making.
General objectives of the discipline	<ul style="list-style-type: none"> • To provide fundamental knowledge regarding the organization and principles of primary healthcare and family medicine. • To develop understanding of preventive medicine, health promotion, and disease screening strategies. • To familiarize students with the management and monitoring of chronic diseases in primary care settings. • To promote the integration of clinical, preventive, and social aspects of patient care.
Specific objectives of the discipline	<ul style="list-style-type: none"> • Identify the main functions and responsibilities of the family physician in primary healthcare. • Explain preventive activities such as immunization, screening programs, and health education. • Understand the principles of chronic disease monitoring and long-term patient management.

	<ul style="list-style-type: none"> Analyze healthcare needs of vulnerable populations including children, pregnant women, and elderly patients. Develop communication and counseling skills for effective patient education and health promotion.
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Learning Outcomes	
Knowledge	Students identify the principles, organization, and functions of primary health care and family medicine, describe preventive strategies, screening programs, and health promotion activities in community healthcare, explain the principles of chronic disease management and patient monitoring in primary care.
Skills	Students interpret clinical and epidemiological information relevant to preventive medicine and community health, analyze healthcare needs of individuals and families in primary care contexts, evaluate strategies for prevention, screening, and chronic disease management in family medicine.
Responsibilities/ Autonomy	Students apply principles of preventive medicine and health promotion in primary healthcare contexts, practice patient-centered communication and counseling strategies during clinical interactions, adhere to ethical and professional standards when addressing community health and patient care.

Course Syllabus	Hours
Course #1 – Primary Healthcare: General Context, European Context, Principles, and Particularities Examining primary healthcare in both general and European contexts. Discussing key principles, defining characteristics, and unique aspects of primary care.	1
Course #2 – Supervision of Family and Community Health Focusing on the health indicators of individuals and communities, encompassing physical, mental, social, and community health. Reviewing the indicators for family health, special family health concerns, and relevant pathologies.	1
Course #3 – Preventive Activity in Family Medicine Exploring immunoprophylaxis in family medicine, the role of the family doctor in immunization, and the significance of epidemiological investigations in preventative healthcare.	1
Course #4 – Prevention, Control, and Management of Chronic Diseases in Family Medicine Addressing the preventive measures, control strategies, and management practices for chronic diseases within the family medicine setting.	1
Course #5 – Promoting Optimal Growth and Development of the Child in Family Medicine Emphasizing the role of family medicine in promoting the healthy growth and development of children, focusing on early intervention and preventive care.	1
Course #6 – Primary Medical Care of the Pregnant Woman Discussing the family doctor’s role in providing primary medical care during pregnancy, including antenatal care, screenings, and health assessments.	1
Course #7 – Promotion of Breastfeeding and Correct Feeding for Infants and Young Children Focusing on the promotion of breastfeeding, addressing the nutritional needs of infants, and exploring age-appropriate feeding practices for young children.	1

Course Syllabus	Hours
Course #8 – Infant and Toddler Primary Care Protocols Providing protocols for the primary care of infants and toddlers, focusing on their specific healthcare needs during early childhood development.	1
Course #9 – Primary Care and Management of Chronic Conditions in Family Medicine Exploring strategies for managing chronic conditions in family practice, focusing on the ongoing care, monitoring, and prevention of disease progression.	1
Course #10 – Continuation of Primary Care and Management of Chronic Conditions in Family Medicine A further exploration of chronic condition management, with a particular focus on maintaining long-term patient health and quality of life through primary care.	1
Course #11 – Management of Home Consultation and Palliative Care in Family Medicine Discussing the family doctor’s role in home consultations and providing palliative care, with an emphasis on compassionate and holistic care for patients at the end of life.	1
Course #12 – Family Planning in Primary Healthcare Examining family planning strategies, including contraceptive options and counseling, within the primary healthcare context.	1
Course #13 – Medical Assistance in the Family Medicine Office An overview of medical assistance provided within the family medicine office, with an emphasis on office management, patient care, and organizational practices.	1
Course #14 – Integrated Approach to Patient Care in a Medico-Social Context Focusing on an integrated approach to patient care, taking into account the patient's rights, mental health, child welfare, and domestic violence concerns, within the family medicine framework.	1

Laboratory Syllabus	Hours
Laboratory Work #1 – Principles of Communication and Counseling for Health Exploring the essential principles of communication and counseling in the context of healthcare, with a focus on patient engagement, empathy, and support for health-related decisions.	2
Laboratory Work #2 – Management of the Family Medicine Office: Framework Contract Understanding the administrative and legal aspects of managing a family medicine office, with a particular focus on framework contracts and their role in practice management.	2
Laboratory Work #3 – Consultation in the Family Medicine Office: Principles, Characteristics, Objectives Examining the structure and objectives of consultations within the family medicine office, emphasizing the principles and characteristics that define effective patient care.	2
Laboratory Work #4 – Consultation at Home Discussing the dynamics of home consultations, including the unique aspects of patient care in a home setting and strategies for providing effective, compassionate care outside the office.	2
Laboratory Work #5 – Medical Assistance of the Terminal Patient and Their Family Focusing on providing medical assistance to terminally ill patients, with particular attention to palliative care, symptom management, and family support.	2
Laboratory Work #6 – Growth and Development of Infants and Small Children: Color of Growth and Development, e.g., Balance Sheet Exploring growth and development in infants and small children, using assessment tools like growth charts and development milestones to track health progress.	2
Laboratory Work #7 – Prenatal Consultation in the Family Doctor's Office; Follow-up of the Pregnant Woman	2

Laboratory Syllabus	Hours
Providing prenatal care consultations, with an emphasis on monitoring the health of the pregnant woman and ensuring appropriate follow-up during pregnancy.	
Laboratory Work #8 – Treatment Principles in Family Medicine Exploring general principles of treatment in family medicine, including personalized care plans, the use of medications, and lifestyle interventions for various conditions.	2
Laboratory Work #9 – Control and Monitoring of Chronic Diseases in Family Medicine (Type II Diabetes) Examining the management of Type II diabetes in family medicine, including monitoring strategies, medication management, and lifestyle interventions to control the condition	2
Laboratory Work #10 – Control and Monitoring of Chronic Diseases in Family Medicine (Hypertension) Focusing on the control and monitoring of hypertension within family practice, including treatment options, lifestyle modifications, and ongoing patient care.	2
Laboratory Work #11 – Control and Monitoring of Chronic Diseases in Family Medicine (Heart Failure) Discussing the management of heart failure in family medicine, including treatment strategies, monitoring techniques, and patient support to improve quality of life.	2
Laboratory Work #12 – Control and Monitoring of Chronic Diseases in Family Medicine (Chronic Hepatitis and Liver Cirrhosis) Exploring the management of chronic hepatitis and liver cirrhosis, with a focus on treatment, monitoring, and interventions to manage liver disease in a family medicine context.	2
Laboratory Work #13 – Control and Monitoring of Chronic Diseases in Family Medicine (Dementia and Oncological Diseases) Providing insights into managing chronic diseases like dementia and cancer in the family practice setting, including treatment approaches, patient education, and family support.	2
Laboratory Work #14 – Education for Health and Screening Principles in Family Medicine Focusing on health education principles and screening practices in family medicine, including preventive care strategies and the role of screenings in early detection and health promotion.	2

Minimum References:
1. Marshall M, editor. Oxford textbook of primary medical care . 2nd ed. Oxford: Oxford University Press; 2021.
2. Simon C, Everitt H, Kendrick T, editors. Oxford handbook of primary care medicine . 3rd ed. Oxford: Oxford University Press; 2022.
3. Simon C, Everitt H, van Dorp F, editors. Oxford handbook of general practice . 5th ed. Oxford: Oxford University Press; 2020.
4. Starfield B, Shi L, Macinko J. Primary care: balancing health needs, services, and technology . 2nd ed. New York: Oxford University Press; 2011.
5. Teaching support materials

Correlation of the contents of the discipline with the expectations of the representatives of the epistemic community, professional associations and representative employers in the health sector
•

How the information is transmitted	
Type of Activity	Teaching methods used

How the information is transmitted	
Lecture	<ul style="list-style-type: none"> • Systematic and structured presentation of the fundamental principles of primary health care, focusing on health promotion, disease prevention, and the organization of community-based medical services, delivered through oral exposition and interactive question-and-answer discussions.
Laboratory (Practical Work)	<ul style="list-style-type: none"> • Practical activities focused on the application of primary health care principles through case discussions, community health assessment, and development of preventive and health promotion strategies in clinical practice.

Minimal performance standards – the minimum level of activities that need to be fulfilled by the student during the practical works to be accepted to the final laboratory exam:

- Attendance of at least 70% of all practical sessions, with mandatory completion of all missed activities, including absences recorded during mid-semester evaluations.
- Completion of thematic assignments to support the understanding of fundamental concepts corresponding to each practical session.
- Identification of basic anatomical structures using a variety of educational materials: skeletal models, osteological collections, anatomical specimens, topographic sections, preserved human cadavers, 3D anatomical casts, as well as classical iconography and medical imaging (X-ray, CT, MRI).
- Active and interactive participation during practical sessions, including responses to the instructor's questions, involvement in discussions, and application of theoretical knowledge in practice.
- Use of the virtual dissection table to deepen the understanding of three-dimensional topographical relationships and to correlate findings with classical dissection and imaging techniques.
- Exploration and consolidation of taught concepts through projected digital anatomical atlases (e.g., Netter, Thieme) to enhance visual anatomical learning.

Minimum set of activities that must be performed by the student in the practical exam in order to be admitted to the exam (final verification): obtaining an average of 5 in the practical exams of anatomy and embryology

- Attainment of a minimum average grade of 5 (five) in all practical tests and evaluations conducted throughout the semester.
- Demonstrated ability to identify major anatomical structures using various educational tools: anatomical specimens, dissected cadaveric material, 3D anatomical models, and the virtual dissection table.

Specific conditions for carrying out the theoretical and practical activities of the discipline:

- Active participation of the student in lectures and practical sessions, including attendance at demonstrative activities using the virtual dissection table and projected anatomical atlases.
- Successful completion of colloquia and practical-applied examinations in anatomy and embryology, as mandatory stages in the validation of specific competencies.
- Continuous engagement in the learning process through individual study and teamwork, to ensure the assimilation of fundamental knowledge and the ability to establish anatomo-clinical correlations in an interdisciplinary context.

Consideration points for computing the final score:	Percentage share of scoring (Total = 100%)
- Responses to the final exam	60 %
- Responses to the laboratory examination	15 %
- Periodic checks with written exams	10 %
- Continuous testing through the semester	10 %
- Projects / Translations / Posters / Essays, etc.	-
- Other activities:	5 %
Description of the actual methods of examination – E	
<ul style="list-style-type: none"> • The final examination consists of an oral presentation of three topics randomly selected by the student, one from each of the following categories: <ul style="list-style-type: none"> • Topics from lecture content; • Topics from practical work. • All examination topics are published and communicated to students at the beginning of the semester, ensuring effective and transparent preparation. • The exam is conducted in groups of at least three students, in the presence of the course coordinator, the head of practical activities, and the teaching assistant who supervised the group during the semester. • Students are granted thinking time, and the assessment is carried out in a transparent and supportive environment, allowing for coherent and logical articulation of knowledge. • The choice of oral examination is justified by the nature of the medical profession, where verbal communication is essential, and by the need to assess the student's ability to establish anatomo-clinical correlations. 	
Minimal requirements for grade 5 (or how grade 5 is awarded)	Requirements for grade 10 (or how grade 10 is awarded)
<ul style="list-style-type: none"> • Attendance of at least 70% of practical sessions, with mandatory completion of all missed activities. • Completion of all three colloquia during the semester, with a minimum grade of 5 in at least two of them (colloquia may be retaken if failed). • Submission of practical session assignments and demonstration of knowledge of basic concepts. • Achievement of an average grade of 5 in the practical examinations in anatomy and embryology. • Provision of minimally correct answers to the three oral exam topics, demonstrating understanding of the fundamental requirements of the discipline. 	<ul style="list-style-type: none"> • Achievement of an average grade above 9 in all three colloquia during the semester. • An average above 9 in the practical anatomy and embryology examinations, including accurate anatomical identification and anatomo-clinical justification. • Delivery of coherent, complete, and clinically correlated answers to all three oral exam topics, demonstrating advanced competencies and the ability to synthesize and integrate anatomical knowledge.

Date of completion

15.09.2025

**Discipline Coordinator,
Muşat Simona, Lecturer**

**Head of Department,
Ioan Sorin Tudorache, Assoc. Professor, M.D.,
PhD**

**Course Coordinator,
Muşat Simona, Lecturer**

**Laboratory Coordinator,
Muşat Simona, Lecturer**

**Department Approval Date
18.09.2025**



DISCIPLINE FILE

Faculty	MEDICINE
Department	PRECLINICAL SCIENCES
Field of study	HEALTHCARE
Study cycle	BACHELOR
Study programme	MEDICINE IN ENGLISH

Discipline`s Name	MEDICAL SPECIALIZED COMMUNICATION IN MODERN (ROMANIAN) FOREIGN LANGUAGES (I)				
Didactic position, name and surname of the Discipline Coordinator	-				
Didactic position, name and surname for the Course Coordinator	-				
Didactic position, name and surname for the Coordinator of the Seminar / Laboratory / Clinical Traineeship	Buză Iulia, Lecturer				
Discipline Code	MLE.2.3.7	Formative category of the discipline		CS	
Year of Study	II	Semester	3	Type of the final evaluation (E, V)	C3
Discipline Regime (M -mandatory, E -elective)			M	No. of credits	2

No. of Hours per week	1	Out of which are Course hours:	-	Seminar / Practical Activity / Clinical Stage	1
Total of hours in the curriculum	14	Out of which are Course hours:	-	Seminar / Practical Activity / Clinical Stage	14
		Total hours per semester	50	Total hours of individual study	36

Distribution of time pool per week				Hours
1. Study of the course material				2
2. Study according with the course support, manuals				12
3. Study of the minimal bibliography				2
4. Additional documentation in the library				2
5. Specific activity for the seminary or laboratory				1

Distribution of time pool per week	Hours
6. Homework, translations, etc.	0
7. Preparing for different written exams	1
8. Preparing for oral examinations	0
9. Preparing for the final examination	5
10. Consultations	2
11. In the field documentation	0
12. Documentation from web sources, portals, wiki websites	6
13. Tutoring	2
14. Examinations	2
15. Other activities:	0

Course name	MEDICAL SPECIALIZED COMMUNICATION IN MODERN (ROMANIAN) FOREIGN LANGUAGES (I)
Specific professional competencies	<ul style="list-style-type: none"> Understanding the basic structure and terminology of medical communication in Romanian. Identifying vocabulary related to diseases, symptoms, diagnostic procedures, and anatomical structures. Interpreting patient descriptions of symptoms and medical information in Romanian. Conducting basic clinical dialogues and patient interviews using appropriate medical terminology. Communicating medical information clearly and accurately in Romanian in clinical contexts.
Transversal competencies	<ul style="list-style-type: none"> Development of interpersonal communication skills in healthcare environments. Demonstration of empathy and patient-centered communication during medical interactions. Collaboration with healthcare professionals using appropriate professional language. Respect for ethical principles and cultural sensitivity in communication with patients. Continuous development of linguistic and intercultural competence in medical practice.
General objectives of the discipline	<ul style="list-style-type: none"> To develop basic Romanian language communication skills necessary for clinical practice. To familiarize students with fundamental medical terminology used in Romanian healthcare settings. To improve the ability to conduct patient interviews and explain medical information clearly. To promote effective and empathetic communication in doctor-patient interactions.
Specific objectives of the discipline	<ul style="list-style-type: none"> Identify medical vocabulary related to diseases, symptoms, and diagnostic procedures. Practice structured patient interviews and clinical communication scenarios in Romanian. Develop the ability to explain medical conditions and procedures in accessible language.

	<ul style="list-style-type: none"> • Improve communication skills in discussing health conditions with patients and families. • Understand the importance of clear and ethical communication in clinical practice.
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Learning Outcomes	
Knowledge	Students identify Romanian medical terminology related to diseases, symptoms, diagnostic procedures, and anatomical structures, describe the linguistic structure and vocabulary used in basic medical communication and patient interviews, explain the principles of effective communication in healthcare interactions.
Skills	Students interpret patient descriptions of symptoms and clinical information communicated in Romanian, analyze medical communication scenarios involving diagnosis, treatment explanation, and patient counseling, perform structured patient interviews and clinical dialogues using appropriate medical vocabulary.
Responsibilities/ Autonomy	Students apply Romanian medical terminology during patient interviews and clinical communication, practice ethical principles and empathetic communication when interacting with patients, use effective communication strategies when explaining diagnoses, investigations, and treatment recommendations.

Laboratory Syllabus	Hours
Laboratory Work #1 – Infectious Diseases – Vocabulary and Communication Practice Medical terminology and patient communication related to common infectious diseases including whooping cough, chickenpox, measles, mumps, smallpox, poliomyelitis, and diphtheria.	1
Laboratory Work #2 – The Nervous System – Brief Overview Introduction to the structure and functions of the nervous system. Practice in describing neurological anatomy and disorders in clear, patient-friendly language.	1
Laboratory Work #3 – Alternative Medicine and Medical Terminology Discussion of various alternative medicine techniques. Focus on word formation, prefixes, suffixes, and derivation in medical vocabulary for accurate expression and comprehension.	1
Laboratory Work #4 – Leukemias – Communication and Key Concepts Terminology and concepts related to leukemias. Training in explaining diagnoses, treatments, and patient care in accessible language.	1
Laboratory Work #5 – Neurological Disorders – Descriptions and Dialogue Communication focused on Alzheimer’s disease, Broca’s aphasia, cerebello-olivary degeneration of Holmes, Huntington’s and Parkinson’s diseases, Parinaud and Tourette syndromes. Emphasis on patient understanding and accurate terminology.	1
Laboratory Work #6 – Fetal Diagnosis – Medical Expression and Clarity Vocabulary and structured dialogue related to prenatal diagnostic procedures. Practice in explaining tests and outcomes to patients.	1
Laboratory Work #7 – Congenital Fetal Infections – Medical Communication Terminology and communication skills related to congenital infections. Focus on describing conditions and potential outcomes in sensitive, understandable terms.	1
Laboratory Work #8 – Child Development – Stages and Milestones Discussion and communication practice related to stages of child development. Emphasis on developmental vocabulary and effective parent-provider dialogue.	1

Laboratory Syllabus	Hours
Laboratory Work #9 – Female Genito-Urinary Disorders – Language and Sensitivity Medical language and communication approaches for disorders affecting the female genitourinary system. Focus on empathy and clarity.	1
Laboratory Work #10 – Male Genito-Urinary Disorders – Clinical Communication Terminology and patient-centered language for disorders in the male genitourinary tract. Role-play and patient interview techniques.	1
Laboratory Work #11 – Effects of Pregnancy on the Mother – APGAR Score Discussion of physiological changes during pregnancy and the APGAR scoring system. Practice in explaining maternal health issues and newborn assessment.	1
Laboratory Work #12 – Blood Vessel Vocabulary – Structure and Function Focused vocabulary development on the structure and roles of blood vessels. Practice in describing circulatory function and common conditions.	1
Laboratory Work #13 – Diagnostic and Procedural Terms Terminology for the cardiovascular system, including diagnostic, procedural, and lab terms. Exercises in translating technical terms into patient-friendly language.	1
Laboratory Work #14 – Final Revision Comprehensive review and consolidation of all previously covered content. Practice through case-based scenarios and terminology recall.	1

Minimum References:

1. Murar I, Nagy E. Romanian for Foreign Medical Students: Language and Communication Skills in Clinical Contexts. 2nd ed. Cluj-Napoca: Casa Cărții de Știință; 2021.
2. Păcurar A, Toma I. Romanian for Medical Purposes: A Practical Course for Foreign Students. 1st ed. Iași: Editura Universității „Grigore T. Popa” din Iași; 2020.
3. Tănase D, Dănilă C. Romanian Language for Medical Students: Vocabulary and Communication. 1st ed. Bucharest: Editura Universitară Carol Davila; 2022.
4. Chabner DE. The Language of Medicine. 12th ed. St. Louis, MO: Elsevier; 2021.
5. Glendinning E, Holmström B. English in Medicine: A Course in Communication Skills. 3rd ed. Cambridge: Cambridge University Press; 2020.
6. Teaching support materials

Correlation of the contents of the discipline with the expectations of the representatives of the epistemic community, professional associations and representative employers in the health sector

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How the information is transmitted

Type of Activity	Teaching methods used
Lecture	•
Laboratory (Practical Work)	• Practical activities aimed at developing communication skills in Romanian for medical contexts through structured exercises, analysis of medical texts, and simulated doctor–patient interactions.

Minimal performance standards – the minimum level of activities that need to be fulfilled by the student during the practical works to be accepted to the final laboratory exam:

- Attendance of at least 70% of all practical sessions, with mandatory completion of all missed activities, including absences recorded during mid-semester evaluations.

Minimal performance standards – the minimum level of activities that need to be fulfilled by the student during the practical works to be accepted to the final laboratory exam:

- Completion of thematic assignments to support the understanding of fundamental concepts corresponding to each practical session.
- Identification of basic anatomical structures using a variety of educational materials: skeletal models, osteological collections, anatomical specimens, topographic sections, preserved human cadavers, 3D anatomical casts, as well as classical iconography and medical imaging (X-ray, CT, MRI).
- Active and interactive participation during practical sessions, including responses to the instructor’s questions, involvement in discussions, and application of theoretical knowledge in practice.
- Use of the virtual dissection table to deepen the understanding of three-dimensional topographical relationships and to correlate findings with classical dissection and imaging techniques.
- Exploration and consolidation of taught concepts through projected digital anatomical atlases (e.g., Netter, Thieme) to enhance visual anatomical learning.

Minimum set of activities that must be performed by the student in the practical exam in order to be admitted to the exam (final verification): obtaining an average of 5 in the practical exams of anatomy and embryology

- Attainment of a minimum average grade of 5 (five) in all practical tests and evaluations conducted throughout the semester.
- Demonstrated ability to identify major anatomical structures using various educational tools: anatomical specimens, dissected cadaveric material, 3D anatomical models, and the virtual dissection table.

Specific conditions for carrying out the theoretical and practical activities of the discipline:

- Active participation of the student in lectures and practical sessions, including attendance at demonstrative activities using the virtual dissection table and projected anatomical atlases.
- Successful completion of colloquia and practical-applied examinations in anatomy and embryology, as mandatory stages in the validation of specific competencies.
- Continuous engagement in the learning process through individual study and teamwork, to ensure the assimilation of fundamental knowledge and the ability to establish anatomo-clinical correlations in an interdisciplinary context.

Consideration points for computing the final score:	Percentage share of scoring (Total = 100%)
- Responses to the final exam	60 %
- Responses to the laboratory examination	15 %
- Periodic checks with written exams	10 %
- Continuous testing through the semester	10 %
- Projects / Translations / Posters / Essays, etc.	-
- Other activities:	5 %

Description of the actual methods of examination – E

- The final examination consists of an oral presentation of three topics randomly selected by the student, one from each of the following categories:

<ul style="list-style-type: none"> • Topics from lecture content; • Topics from practical work. • All examination topics are published and communicated to students at the beginning of the semester, ensuring effective and transparent preparation. • The exam is conducted in groups of at least three students, in the presence of the course coordinator, the head of practical activities, and the teaching assistant who supervised the group during the semester. • Students are granted thinking time, and the assessment is carried out in a transparent and supportive environment, allowing for coherent and logical articulation of knowledge. • The choice of oral examination is justified by the nature of the medical profession, where verbal communication is essential, and by the need to assess the student's ability to establish anatomo-clinical correlations. 	
Minimal requirements for grade 5 (or how grade 5 is awarded)	Requirements for grade 10 (or how grade 10 is awarded)
<ul style="list-style-type: none"> • Attendance of at least 70% of practical sessions, with mandatory completion of all missed activities. • Completion of all three colloquia during the semester, with a minimum grade of 5 in at least two of them (colloquia may be retaken if failed). • Submission of practical session assignments and demonstration of knowledge of basic concepts. • Achievement of an average grade of 5 in the practical examinations in anatomy and embryology. • Provision of minimally correct answers to the three oral exam topics, demonstrating understanding of the fundamental requirements of the discipline. 	<ul style="list-style-type: none"> • Achievement of an average grade above 9 in all three colloquia during the semester. • An average above 9 in the practical anatomy and embryology examinations, including accurate anatomical identification and anatomo-clinical justification. • Delivery of coherent, complete, and clinically correlated answers to all three oral exam topics, demonstrating advanced competencies and the ability to synthesize and integrate anatomical knowledge.

Date of completion

15.09.2025

Discipline Coordinator,

Head of Department,

**Ioan Sorin Tudorache, Assoc. Professor, M.D.,
PhD**

Course Coordinator,

**Laboratory Coordinator,
Buză Iulia, Lecturer**

Department Approval Date

18.09.2025



DISCIPLINE FILE

Faculty	MEDICINE
Department	PRECLINICAL SCIENCES
Field of study	HEALTHCARE
Study cycle	BACHELOR
Study programme	MEDICINE IN ENGLISH

Discipline`s Name	PHYSICAL EDUCATION				
Didactic position, name and surname of the Discipline Coordinator	Urichianu Bogdan, Assist. Professor				
Didactic position, name and surname for the Course Coordinator	Urichianu Bogdan, Assist. Professor				
Didactic position, name and surname for the Coordinator of the Seminar / Laboratory / Clinical Traineeship	Urichianu Bogdan, Assist. Professor				
Discipline Code	MLE.2.3.19	Formative category of the discipline		CS	
Year of Study	II	Semester	3	Type of the final evaluation (E, V)	C3
Discipline Regime (M -mandatory, E -elective)			M	No. of credits	1

No. of Hours per week	1	Out of which are Course hours:	-	Seminar / Practical Activity / Clinical Stage	1
Total of hours in the curriculum	14	Out of which are Course hours:	-	Seminar / Practical Activity / Clinical Stage	14
		Total hours per semester	25	Total hours of individual study	11

Distribution of time pool per week				Hours
1. Study of the course material				0
2. Study according with the course support, manuals				2
3. Study of the minimal bibliography				0
4. Additional documentation in the library				0
5. Specific activity for the seminary or laboratory				1

Distribution of time pool per week	Hours
6. Homework, translations, etc.	0
7. Preparing for different written exams	0
8. Preparing for oral examinations	0
9. Preparing for the final examination	1
10. Consultations	0
11. In the field documentation	0
12. Documentation from web sources, portals, wiki websites	1
13. Tutoring	2
14. Examinations	2
15. Other activities:	0

Course name	PHYSICAL EDUCATION
Specific professional competencies	<ul style="list-style-type: none"> Understanding the principles of physical activity and their role in maintaining health and physical fitness. Identifying fundamental motor skills and physical conditioning exercises used in general physical training. Developing endurance, strength, coordination, and flexibility through structured physical activities. Recognizing the importance of regular physical activity in the prevention of lifestyle-related diseases. Applying appropriate techniques and safety rules during physical training and sports activities.
Transversal competencies	<ul style="list-style-type: none"> Development of teamwork and cooperation during group physical activities and sports exercises. Enhancement of communication and interpersonal interaction in collective training environments. Promotion of responsible behavior, discipline, and respect for rules in sports practice. Encouragement of a healthy lifestyle and personal wellbeing through regular physical activity. Development of self-assessment and self-improvement abilities related to physical performance.
General objectives of the discipline	<ul style="list-style-type: none"> To promote physical activity and healthy lifestyle habits among medical students. To develop general physical fitness, motor coordination, and endurance. To encourage active participation in sports and recreational physical activities. To foster awareness of the role of physical exercise in maintaining physical and mental health.
Specific objectives of the discipline	<ul style="list-style-type: none"> Develop basic motor skills and improve physical conditioning through structured training exercises. Improve endurance, speed, strength, and flexibility through progressive physical activities. Learn and apply the fundamental rules and techniques of selected sports activities.

	<ul style="list-style-type: none"> • Encourage teamwork and cooperation in physical exercise contexts. • Promote self-discipline, safety awareness, and respect for physical training guidelines.
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Learning Outcomes	
Knowledge	Students identify the principles of physical activity and their role in maintaining health and physical fitness, describe fundamental motor skills and basic physical training methods used to improve endurance, strength, and coordination, explain the importance of regular physical activity in disease prevention and overall wellbeing.
Skills	Students interpret and perform basic physical exercises aimed at developing endurance, speed, strength, and flexibility, demonstrate motor coordination and sports-related skills during structured physical training activities, evaluate their physical performance and progress using basic physical fitness indicators.
Responsibilities/ Autonomy	Students apply principles of safe and effective physical training during sports and exercise activities, teamwork and cooperation skills in group physical training sessions, use healthy lifestyle habits and regular physical activity practices in daily life.

Laboratory Syllabus	Hours
Laboratory Work #1 – Communication of Guidelines and Rules Organizing students into groups; light running alternated with mobility exercises.	2
Laboratory Work #2 – General Physical Training Circuit Use of equipment (fixed ladders, medicine balls, gymnastics benches, basic acrobatics); endurance run – Boys: 5 minutes Girls: 4 minutes.	2
Laboratory Work #3 – General Physical Training Circuit (Partner Exercises) Free and medicine ball exercises in pairs, acrobatics; endurance run – Boys: 6 minutes Girls: 5 minutes.	2
Laboratory Work #4 – Outdoor General Physical Training Circuit Stadium stairs, rope exercises, motor skill games; endurance run – Boys: 7 minutes Girls: 6 minutes.	2
Laboratory Work #5 – Development of Motor Skills – Speed and Endurance Running drills, jumping and throwing exercises; long-distance running (8–10 minutes), sprinting (up to 50 meters), standing long jump.	2
Laboratory Work #6 – Sports-Specific Skills Development Technical and tactical exercises in sports games; table tennis – bilateral play; targeted musculoskeletal and general physical development exercises (flexibility, joint and muscle mobility).	2
Laboratory Work #7 – Assessment and Evaluation Control tests and standards.	2

Minimum References:
1. Beach PS, Perreault M, Brian A, Collier DH. Motor Learning and Development, 3rd ed. Champaign (IL): Human Kinetics; 2024.

Minimum References:

2. Colvin AV, Egner NJ, Walker PJ. Teaching Fundamental Motor Skills, 4th ed. Champaign (IL): Human Kinetics; 2023.
3. Spittle M. Motor Learning and Skill Acquisition: Applications for Physical Education and Sport. London: Bloomsbury Academic; 2021.
4. Zaccagni L (ed). Physical Activity, Wellness and Health: Challenges, Benefits and Strategies. Basel: MDPI Books; 2021.
5. Colvin A Vonnie, Egner N J, Walker P J. Teaching Fundamental Motor Skills, 4th ed. (eBook with HKPropel). Champaign (IL): Human Kinetics; 2023. (Same as #2, acknowledging digital edition)
6. Teaching support materials

Correlation of the contents of the discipline with the expectations of the representatives of the epistemic community, professional associations and representative employers in the health sector

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How the information is transmitted

Type of Activity	Teaching methods used
Lecture	•
Laboratory (Practical Work)	<ul style="list-style-type: none"> • Practical activities aimed at developing physical fitness, coordination, and endurance through structured physical exercises, with emphasis on the promotion of a healthy lifestyle and regular physical activity.

Minimal performance standards – the minimum level of activities that need to be fulfilled by the student during the practical works to be accepted to the final laboratory exam:

- Attendance of at least 70% of all practical sessions, with mandatory completion of all missed activities, including absences recorded during mid-semester evaluations.
- Completion of thematic assignments to support the understanding of fundamental concepts corresponding to each practical session.
- Identification of basic anatomical structures using a variety of educational materials: skeletal models, osteological collections, anatomical specimens, topographic sections, preserved human cadavers, 3D anatomical casts, as well as classical iconography and medical imaging (X-ray, CT, MRI).
- Active and interactive participation during practical sessions, including responses to the instructor's questions, involvement in discussions, and application of theoretical knowledge in practice.
- Use of the virtual dissection table to deepen the understanding of three-dimensional topographical relationships and to correlate findings with classical dissection and imaging techniques.
- Exploration and consolidation of taught concepts through projected digital anatomical atlases (e.g., Netter, Thieme) to enhance visual anatomical learning.

Minimum set of activities that must be performed by the student in the practical exam in order to be admitted to the exam (final verification): obtaining an average of 5 in the practical exams of anatomy and embryology

- Attainment of a minimum average grade of 5 (five) in all practical tests and evaluations conducted throughout the semester.

- Demonstrated ability to identify major anatomical structures using various educational tools: anatomical specimens, dissected cadaveric material, 3D anatomical models, and the virtual dissection table.

Specific conditions for carrying out the theoretical and practical activities of the discipline:

- Active participation of the student in lectures and practical sessions, including attendance at demonstrative activities using the virtual dissection table and projected anatomical atlases.
- Successful completion of colloquia and practical-applied examinations in anatomy and embryology, as mandatory stages in the validation of specific competencies.
- Continuous engagement in the learning process through individual study and teamwork, to ensure the assimilation of fundamental knowledge and the ability to establish anatomo-clinical correlations in an interdisciplinary context.

Consideration points for computing the final score:	Percentage share of scoring (Total = 100%)
- Responses to the final exam	60 %
- Responses to the laboratory examination	15 %
- Periodic checks with written exams	10 %
- Continuous testing through the semester	10 %
- Projects / Translations / Posters / Essays, etc.	-
- Other activities:	5 %

Description of the actual methods of examination – E

- The final examination consists of an oral presentation of three topics randomly selected by the student, one from each of the following categories:
 - Topics from lecture content;
 - Topics from practical work.
- All examination topics are published and communicated to students at the beginning of the semester, ensuring effective and transparent preparation.
- The exam is conducted in groups of at least three students, in the presence of the course coordinator, the head of practical activities, and the teaching assistant who supervised the group during the semester.
- Students are granted thinking time, and the assessment is carried out in a transparent and supportive environment, allowing for coherent and logical articulation of knowledge.
- The choice of oral examination is justified by the nature of the medical profession, where verbal communication is essential, and by the need to assess the student's ability to establish anatomo-clinical correlations.

Minimal requirements for grade 5 (or how grade 5 is awarded)	Requirements for grade 10 (or how grade 10 is awarded)
<ul style="list-style-type: none"> • Attendance of at least 70% of practical sessions, with mandatory completion of all missed activities. • Completion of all three colloquia during the semester, with a minimum grade of 5 in at least two of them (colloquia may be retaken if failed). 	<ul style="list-style-type: none"> • Achievement of an average grade above 9 in all three colloquia during the semester. • An average above 9 in the practical anatomy and embryology examinations, including accurate anatomical identification and anatomo-clinical justification. • Delivery of coherent, complete, and clinically correlated answers to all three oral exam

<ul style="list-style-type: none"> • Submission of practical session assignments and demonstration of knowledge of basic concepts. • Achievement of an average grade of 5 in the practical examinations in anatomy and embryology. • Provision of minimally correct answers to the three oral exam topics, demonstrating understanding of the fundamental requirements of the discipline. 	<p>topics, demonstrating advanced competencies and the ability to synthesize and integrate anatomical knowledge.</p>
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Date of completion

15.09.2025

Discipline Coordinator,

Head of Department,

**Ioan Sorin Tudorache, Assoc. Professor, M.D.,
PhD**

Course Coordinator,

**Laboratory Coordinator,
Urichianu Bogdan, Assist. Professor**

Department Approval Date

18.09.2025



DISCIPLINE FILE

Faculty	MEDICINE
Department	PRECLINICAL SCIENCES
Field of study	HEALTHCARE
Study cycle	BACHELOR
Study programme	MEDICINE IN ENGLISH

Discipline`s Name	NEUROSCIENCES				
Didactic position, name and surname of the Discipline Coordinator	Ioan Sorin Tudorache, Assoc. Professor, M.D., PhD				
Didactic position, name and surname for the Course Coordinator	Ioan Sorin Tudorache, Assoc. Professor, M.D., PhD				
Didactic position, name and surname for the Coordinator of the Seminar / Laboratory / Clinical Traineeship	Ioan Sorin Tudorache, Assoc. Professor, M.D., PhD				
Discipline Code	MLE.2.4.8	Formative category of the discipline		DS	
Year of Study	II	Semester	4	Type of the final evaluation (E, V)	E4
Discipline Regime (M -mandatory, E -elective)			M	No. of credits	4

No. of Hours per week	4	Out of which are Course hours:	2	Seminar / Practical Activity / Clinical Stage	2
Total of hours in the curriculum	56	Out of which are Course hours:	28	Seminar / Practical Activity / Clinical Stage	28
		Total hours per semester	100	Total hours of individual study	44

Distribution of time pool per week				Hours
1. Study of the course material				2
2. Study according with the course support, manuals				15
3. Study of the minimal bibliography				2
4. Additional documentation in the library				2
5. Specific activity for the seminary or laboratory				2

Distribution of time pool per week	Hours
6. Homework, translations, etc.	0
7. Preparing for different written exams	1
8. Preparing for oral examinations	0
9. Preparing for the final examination	6
10. Consultations	2
11. In the field documentation	0
12. Documentation from web sources, portals, wiki websites	8
13. Tutoring	2
14. Examinations	2
15. Other activities:	0

Course name	NEUROSCIENCES
Specific professional competencies	<ul style="list-style-type: none"> • Use of standardized neuroanatomical terminology to describe the central nervous system and sensory structures. • Identification, dissection, and functional interpretation of neural structures (central and peripheral) during laboratory sessions and clinical assessments. • Correlation of anatomical structures with functional pathways involved in reflexes, sensation, and motor control, with clinical and imaging relevance (MRI, CT, angiography). • Recognition of structure–function relationships within the CNS relevant to neurosurgery, neurology, and neuroimaging. • Applied analysis of the external and internal configuration of the brain and spinal cord in relation to neurological pathology.
Transversal competencies	<ul style="list-style-type: none"> • Development of professional communication skills using precise neuroanatomical terminology in oral presentations, written reports, and exams. • Strengthening teamwork abilities through collaborative dissection, group-based learning, and participation in extracurricular activities (Anatomy Scientific Circle). • Integration of scientific resources and digital platforms (virtual dissection tables, neuroanatomy atlases) to support self-directed learning. • Cultivation of critical and analytical thinking for evaluating nervous system function by correlating anatomical knowledge with clinical syndromes.
General objectives of the discipline	<ul style="list-style-type: none"> • To acquire an in-depth understanding of the structure and topography of the central nervous system and sensory organs in a functional context. • To develop competencies in identifying and interpreting neuroanatomical structures in cadaveric specimens, histological slides, and medical imaging. • To integrate concepts of morphology, embryology, and spatial organization in understanding neurological disorders and planning therapeutic approaches. • To prepare students for the systemic analysis of the CNS and its integration with sensory, motor, and autonomic systems.

Specific objectives of the discipline	<ul style="list-style-type: none"> • To identify and describe the topography of the spinal cord, brainstem, cerebellum, diencephalon, and cerebral hemispheres. • To examine the grey and white matter of the CNS, identifying major tracts and functional nuclei. • To dissect and recognize cranial nerves, the visual, auditory, and vestibular systems, and understand their clinical functions. • To correlate the structure of the CNS with neurological signs and symptoms by integrating anatomy with medical imaging and lesion localization. • To perform clinical recaps of the thoracic, abdominopelvic, and limb regions, emphasizing anatomical-clinical correlations in diagnostics and interventions.
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Learning Outcomes	
Knowledge	Students identify the anatomical structures of the central nervous system, including the spinal cord, brainstem, cerebellum, diencephalon, and cerebral hemispheres, describe the organization of grey and white matter, major neural pathways, and cranial nerve structures, understand the relationship between neuroanatomical structures, sensory and motor functions, and the organization of the visual and auditory systems.
Skills	Students interpret neuroanatomical structures using cadaveric specimens, anatomical models, digital atlases, and medical imaging, analyze functional pathways of the nervous system involved in reflexes, sensory processing, and motor control, evaluate anatomo-clinical correlations between nervous system structures and neurological signs or syndromes.
Responsibilities/ Autonomy	Students apply neuroanatomical knowledge in the interpretation of clinical findings and medical imaging, use standardized neuroanatomical terminology in academic discussions and clinical contexts, adhere to ethical and professional conduct during dissection activities and collaborative laboratory work.

Course Syllabus	Hours
Course #1 – Central Nervous System and Spinal Cord Overview Study of the spinal nerves and medullary vegetative reflexes. Vertebral canal opening via laminectomy. Examination of the spinal meninges and cerebrospinal fluid. Clinical anatomy of the spinal cord and its external configuration.	2
Course #2 – Grey Substance of the Spinal Cord Detailed examination of the internal organization of the spinal cord’s grey matter. Identification of functional zones and their clinical relevance.	2
Course #3 – White Substance and Vascularization of the Spinal Cord Study of the ascending and descending tracts in the white matter. Analysis of the spinal vascular supply and implications for spinal cord pathology.	2
Course #4 – Cranial Cavity and Brainstem Introduction Opening of the skull and identification of encephalic meninges. Overview of dural venous sinuses. External configuration of the brainstem and identification of cranial nerves with their apparent origins and trajectories.	2

Course Syllabus	Hours
Course #5 – Brainstem: Internal Structure Exploration of the nuclear columns and white matter organization of the brainstem. Anatomy of the fourth ventricle and sectional brainstem anatomy.	2
Course #6 – Cerebellum: Structure and Substance Examination of the external morphology of the cerebellum. Analysis of its internal architecture: white matter, grey matter, and functional regions.	2
Course #7 – Diencephalon and Associated Structures Study of diencephalic components: thalamus, metathalamus, epithalamus, subthalamus, and pineal gland. Anatomy of the hypothalamus, hypophysis, and the hypothalamic–hypophyseal portal system.	2
Course #8 – Cerebral Hemispheres and Ventricular System Overview of external features of the cerebral hemispheres. Study of the lateral ventricles and the pathways of cerebrospinal fluid circulation.	2
Course #9 – White Matter of the Cerebrum and Limbic Structures Study of cerebral white matter, including the internal capsule. Identification of limbic system components such as the hippocampus and amygdala. Introduction to the striatum and correlation with clinical and imaging anatomy.	2
Course #10 – Eyeball and Ocular Appendages Anatomy of the eyeball: tunics, chambers, and refractive media. Examination of ocular appendages involved in protection, mobility, and support.	2
Course #11 – Anatomy of the Ear Structural analysis of the outer, middle, and inner ear. Study of auditory and vestibular systems and their anatomical organization.	2
Course #12 – Clinical Anatomy of the Thoracic Wall and Cavity – Recap Review of the thoracic wall, its musculature, and internal structures. Emphasis on clinical applications and surface anatomy.	2
Course #13 – Clinical Anatomy of the Abdominopelvic Wall and Cavity – Recap Overview of the abdominal and pelvic walls and their contents. Clinical anatomy focus on organ relationships, surface projections, and imaging relevance.	2
Course #14 – Clinical Anatomy of the Limbs – Recap Review of upper and lower limb anatomy. Functional anatomy, vascular and nervous supply, and clinical correlations in locomotor pathologies.	2

Laboratory Syllabus	Hours
Laboratory Work #1 – Central Nervous System and Spinal Cord Overview Macroscopic examination of the spinal cord. Identification of spinal nerves and analysis of autonomic reflex pathways. Opening of the vertebral canal via laminectomy. Study of spinal meninges and cerebrospinal fluid. Clinical orientation and surface projection.	2
Laboratory Work #2 – Grey Matter of the Spinal Cord Topographic and functional analysis of the spinal grey matter. Identification of anterior, posterior, and lateral horns. Clinical significance of somatic and visceral nuclei.	2
Laboratory Work #3 – White Matter and Vascularization of the Spinal Cord Study of ascending and descending fiber tracts. Identification of anterior, lateral, and posterior funiculi. Analysis of the arterial and venous vascular networks of the spinal cord.	2
Laboratory Work #4 – Cranial Cavity and Brainstem Introduction Dissection of the cranial vault. Identification of cranial meninges, dural folds, and venous sinuses. External anatomy of the brainstem and recognition of cranial nerves and their emergence zones.	2

Laboratory Syllabus	Hours
Laboratory Work #5 – Internal Structure of the Brainstem Sectional anatomy of the medulla oblongata, pons, and midbrain. Study of nuclear columns, reticular formation, and fourth ventricle configuration.	2
Laboratory Work #6 – Cerebellum: Morphology and Substance Examination of the cerebellar hemispheres, vermis, and fissures. Dissection of white matter (arbor vitae) and cerebellar nuclei. Functional topography.	2
Laboratory Work #7 – Diencephalon and Hypothalamic Region Identification of thalamic nuclei, epithalamus, metathalamus, and subthalamic structures. Dissection of the hypothalamus and pituitary gland. Study of the hypothalamic-hypophyseal portal system.	2
Laboratory Work #8 – Cerebral Hemispheres and Ventricular System Study of cortical lobes, gyri, sulci, and interhemispheric fissures. Examination of lateral ventricles and cerebrospinal fluid pathways. Analysis of surface anatomy and imaging landmarks.	2
Laboratory Work #9 – White Matter and Limbic System Dissection of the internal capsule and cerebral white matter tracts. Identification of the hippocampus, amygdaloid nucleus, and corpus striatum. Clinical correlations and imaging perspectives.	2
Laboratory Work #10 – Eyeball and Ocular Appendages Anatomy of the ocular globe: tunics, chambers, and lens. Identification of ocular muscles, eyelids, lacrimal apparatus, and neurovascular supply.	2
Laboratory Work #11 – Anatomy of the Ear Dissection of external, middle, and inner ear. Study of auditory ossicles, cochlea, semicircular canals, and associated neural pathways.	2
Laboratory Work #12 – Clinical Anatomy of the Thoracic Wall and Cavity – Recap Synthesis of thoracic wall layers, muscles, pleural cavities, and mediastinal contents. Correlation with imaging and clinical procedures (e.g., thoracentesis, auscultation).	2
Laboratory Work #13 – Clinical Anatomy of the Abdominopelvic Wall and Cavity – Recap Comprehensive review of abdominal and pelvic walls. Surface landmarks, peritoneal reflections, and organ topography. Clinical case-based applications.	2
Laboratory Work #14 – Clinical Anatomy of the Limbs – Recap Consolidated dissection-based review of upper and lower limb anatomy. Analysis of joints, muscle groups, neurovascular structures, and relevant clinical maneuvers.	2

Minimum References:
1. Sadler TW. <i>Langman's Medical Embryology</i> . 15th ed. Wolters Kluwer; 2023. ISBN: 9781975179960.
2. Drake RL, Vogl AW, Mitchell AWM. <i>Gray's Anatomy for Students</i> . 5th ed. Elsevier; 2023. ISBN: 9780323934237.
3. Moore KL, Dalley AF, Agur AMR. <i>Clinically Oriented Anatomy</i> . 9th ed. Wolters Kluwer; 2023. ISBN: 9781975154066.
4. Schünke M, Schulte E, Schumacher U. <i>Thieme Atlas of Anatomy: Internal Organs. Latin Nomenclature</i> . 3rd ed. New York: Thieme Medical Publishers; 2021. ISBN: 9781684200825.
5. Netter FH. <i>Atlas of Human Anatomy: Classic Regional Approach</i> . 8th ed. Elsevier; 2022. ISBN: 9780323680424.
6. Teaching support materials

Correlation of the contents of the discipline with the expectations of the representatives of the epistemic community, professional associations and representative employers in the health sector

- The development of analytical course and practical work plans was based on current recommendations from medical school curricula across the European Union, as well as on ECTS guidelines concerning preclinical education.
- The content was structured following consultations with experts in clinical anatomy, radiology, and surgery, in order to ensure applied relevance and alignment with current labor market demands in the healthcare system.
- To support interdisciplinary teaching (anatomy – medical imaging – semiology), periodic meetings were held with academic staff from both preclinical and clinical departments, aiming to integrate functional anatomy, clinical palpation, and surgical landmark concepts into the teaching process.

How the information is transmitted

Type of Activity	Teaching methods used
Lecture	<ul style="list-style-type: none"> • Interactive learning based on logical and progressive presentation of content. • Multimedia projection of lecture materials, integrating anatomo-clinical imagery and digital atlases.
Laboratory (Practical Work)	<ul style="list-style-type: none"> • Interactive discussions with emphasis on the clinical applicability of anatomical information. • Classical study through dissection and use of specific teaching materials: skeletal models, 3D anatomical casts, osteological collections, anatomical specimens, and topographic sections. • Practical activity conducted partially on a virtual dissection table, facilitating three-dimensional reconstruction of anatomical structures and the understanding of spatial relationships. • Use of preserved human cadavers for direct identification of anatomical structures. • Presentation of radiological, imaging, and clinical anatomy concepts, correlated with CT, MRI, ultrasound, and anatomical atlas projection. • Practical embryology sessions using histological specimens and interactive digital presentations. • Real-time answers and clarifications provided to students' questions during practical sessions.

Minimal performance standards – the minimum level of activities that need to be fulfilled by the student during the practical works to be accepted to the final laboratory exam:

- Attendance of at least 70% of all practical sessions, with mandatory completion of all missed activities, including absences recorded during mid-semester evaluations.
- Completion of thematic assignments to support the understanding of fundamental concepts corresponding to each practical session.
- Identification of basic anatomical structures using a variety of educational materials: skeletal models, osteological collections, anatomical specimens, topographic sections, preserved human cadavers, 3D anatomical casts, as well as classical iconography and medical imaging (X-ray, CT, MRI).

Minimal performance standards – the minimum level of activities that need to be fulfilled by the student during the practical works to be accepted to the final laboratory exam:

- Active and interactive participation during practical sessions, including responses to the instructor’s questions, involvement in discussions, and application of theoretical knowledge in practice.
- Use of the virtual dissection table to deepen the understanding of three-dimensional topographical relationships and to correlate findings with classical dissection and imaging techniques.
- Exploration and consolidation of taught concepts through projected digital anatomical atlases (e.g., Netter, Thieme) to enhance visual anatomical learning.

Minimum set of activities that must be performed by the student in the practical exam in order to be admitted to the exam (final verification): obtaining an average of 5 in the practical exams of anatomy and embryology

- Attainment of a minimum average grade of 5 (five) in all practical tests and evaluations conducted throughout the semester.
- Demonstrated ability to identify major anatomical structures using various educational tools: anatomical specimens, dissected cadaveric material, 3D anatomical models, and the virtual dissection table.

Specific conditions for carrying out the theoretical and practical activities of the discipline:

- Active participation of the student in lectures and practical sessions, including attendance at demonstrative activities using the virtual dissection table and projected anatomical atlases.
- Successful completion of colloquia and practical-applied examinations in anatomy and embryology, as mandatory stages in the validation of specific competencies.
- Continuous engagement in the learning process through individual study and teamwork, to ensure the assimilation of fundamental knowledge and the ability to establish anatomo-clinical correlations in an interdisciplinary context.

Consideration points for computing the final score:	Percentage share of scoring (Total = 100%)
- Responses to the final exam	60 %
- Responses to the laboratory examination	15 %
- Periodic checks with written exams	10 %
- Continuous testing through the semester	10 %
- Projects / Translations / Posters / Essays, etc.	-
- Other activities:	5 %

Description of the actual methods of examination – E

- The final examination consists of an oral presentation of three topics randomly selected by the student, one from each of the following categories:
 - Topics from lecture content;
 - Topics from practical work.
- All examination topics are published and communicated to students at the beginning of the semester, ensuring effective and transparent preparation.

- The exam is conducted in groups of at least three students, in the presence of the course coordinator, the head of practical activities, and the teaching assistant who supervised the group during the semester.
- Students are granted thinking time, and the assessment is carried out in a transparent and supportive environment, allowing for coherent and logical articulation of knowledge.
- The choice of oral examination is justified by the nature of the medical profession, where verbal communication is essential, and by the need to assess the student's ability to establish anatomo-clinical correlations.

Minimal requirements for grade 5 (or how grade 5 is awarded)	Requirements for grade 10 (or how grade 10 is awarded)
<ul style="list-style-type: none"> • Attendance of at least 70% of practical sessions, with mandatory completion of all missed activities. • Submission of practical session assignments and demonstration of knowledge of basic concepts. • Achievement of an average grade of 5 in the practical examinations in neurosciences. • Provision of minimally correct answers to the three oral exam topics, demonstrating understanding of the fundamental requirements of the discipline. 	<ul style="list-style-type: none"> • An average above 9 in the practical neuroscience examination, including accurate anatomical identification and anatomo-clinical justification. • Delivery of coherent, complete, and clinically correlated answers to all three oral exam topics, demonstrating advanced competencies and the ability to synthesize and integrate anatomical knowledge.

Date of completion

16.09.2025

Discipline Coordinator,

**Ioan Sorin Tudorache, Assoc. Professor, M.D.,
PhD**

Head of Department,

**Ioan Sorin Tudorache, Assoc. Professor, M.D.,
PhD**

Course Coordinator,

**Ioan Sorin Tudorache, Assoc. Professor, M.D.,
PhD**

Laboratory Coordinator,

**Ioan Sorin Tudorache, Assoc. Professor, M.D.,
PhD**

Department Approval Date

18.09.2025



DISCIPLINE FILE

Faculty	MEDICINE
Department	PRECLINICAL SCIENCES
Field of study	HEALTHCARE
Study cycle	BACHELOR
Study programme	MEDICINE IN ENGLISH

Discipline`s Name	PHYSIOLOGY (II)				
Didactic position, name and surname of the Discipline Coordinator	Munteanu Ioana, Lecturer				
Didactic position, name and surname for the Course Coordinator	Munteanu Ioana, Lecturer				
Didactic position, name and surname for the Coordinator of the Seminar / Laboratory / Clinical Traineeship	Munteanu Ioana, Lecturer				
Discipline Code	MLE.2.4.9	Formative category of the discipline		FS	
Year of Study	II	Semester	4	Type of the final evaluation (E, V)	E4
Discipline Regime (M -mandatory, E -elective)			M	No. of credits	4

No. of Hours per week	4	Out of which are Course hours:	2	Seminar / Practical Activity / Clinical Stage	2
Total of hours in the curriculum	56	Out of which are Course hours:	28	Seminar / Practical Activity / Clinical Stage	28
		Total hours per semester	100	Total hours of individual study	44

Distribution of time pool per week				Hours
1. Study of the course material				2
2. Study according with the course support, manuals				15
3. Study of the minimal bibliography				2
4. Additional documentation in the library				2
5. Specific activity for the seminary or laboratory				2

Distribution of time pool per week	Hours
6. Homework, translations, etc.	0
7. Preparing for different written exams	1
8. Preparing for oral examinations	0
9. Preparing for the final examination	6
10. Consultations	2
11. In the field documentation	0
12. Documentation from web sources, portals, wiki websites	8
13. Tutoring	2
14. Examinations	2
15. Other activities:	0

Course name	PHYSIOLOGY (II)
Specific professional competencies	<ul style="list-style-type: none"> Understanding the physiological mechanisms regulating the digestive, excretory, endocrine, and sensory systems. Identifying functional processes involved in digestion, absorption, renal function, hormonal regulation, and sensory perception. Interpreting physiological parameters and laboratory investigations related to digestive, renal, endocrine, and nervous system function. Recognizing the physiological basis of homeostasis and the integration of organ systems. Applying physiological principles to the interpretation of functional tests used in clinical practice.
Transversal competencies	<ul style="list-style-type: none"> Development of analytical and critical thinking in interpreting physiological data and experimental results. Effective communication of physiological concepts in academic and clinical contexts. Collaboration during laboratory activities and experimental investigations. Demonstration of professional responsibility and adherence to laboratory safety standards. Use of scientific resources and digital tools to support independent learning and professional development.
General objectives of the discipline	<ul style="list-style-type: none"> To provide fundamental knowledge regarding the physiological mechanisms of major organ systems. To develop the ability to understand functional integration between digestive, renal, endocrine, and sensory systems. To familiarize students with laboratory investigations and functional tests used in physiology. To establish the basis for understanding normal physiological regulation and its relevance to clinical medicine.
Specific objectives of the discipline	<ul style="list-style-type: none"> Identify the physiological mechanisms regulating digestive processes and nutrient absorption. Explain renal function and mechanisms of urine formation and regulation.

	<ul style="list-style-type: none"> • Understand endocrine regulation and hormonal control of metabolism and homeostasis. • Analyze the physiological mechanisms underlying sensory perception and neuromuscular activity. • Develop practical skills in interpreting physiological laboratory investigations.
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Learning Outcomes	
Knowledge	Students identify the physiological mechanisms regulating digestive, renal, endocrine, and sensory systems, describe the functional processes involved in digestion, absorption, urine formation, hormonal secretion, and sensory perception, explain the mechanisms of physiological regulation and homeostasis in the human body.
Skills	Students interpret physiological data obtained through laboratory investigations and functional tests, analyze physiological mechanisms underlying digestive, renal, endocrine, and sensory functions, evaluate physiological parameters related to organ function and systemic regulation.
Responsibilities/ Autonomy	Students apply physiological principles in the interpretation of functional tests and physiological investigations, practice laboratory methods and experimental procedures used in physiological studies, use scientific reasoning and critical thinking when analyzing physiological data and clinical correlations.

Course Syllabus	Hours
Course #1 – Physiology of the Digestive System – General Functions and Regulation Introduction to the motor, digestive, secretory, absorptive, and endocrine functions of the digestive tract. Overview of regulatory mechanisms involving the autonomic nervous system, enteric plexuses, and the diffuse endocrine (APUD) system.	2
Course #2 – Motor Function of the Digestive Tract Analysis of chewing and swallowing, gastric motility (storage, mixing, evacuation), and biliary, small, and large intestine motility. Discussion of neuro-humoral regulation and motor dysfunctions of the digestive system.	2
Course #3 – Secretory Function – Stomach and Pancreas (Part I) Mechanisms, composition, and roles of gastric and pancreatic exocrine secretions. Focus on regulation and the clinical importance of pancreatic “autolytic defense” mechanisms.	2
Course #4 – Secretory Function – Bile System (Part II) Functional anatomy and physiology of bile production. Differences between hepatic and vesicular bile, importance of bile acids, pigments, and regulation mechanisms. Overview of jaundice.	2
Course #5 – Secretory Function – Intestines (Part III) Secretion in the small and large intestines. Role of intestinal juices in digestion, biocenosis of gut flora, and regulation mechanisms.	2
Course #6 – Digestive Function – Enzymatic Activity Optimal conditions and location for digestive enzyme activity across digestive segments. Enzymes involved and their substrates.	2
Course #7 – Absorption Function of the Digestive Tract Mechanisms and specializations of absorption in the small intestine and colon. Processes of	2

Course Syllabus	Hours
trans-epithelial transport for nutrients, vitamins, water, and electrolytes. Introduction to malabsorption.	
Course #8 – Physiology of the Excretory System – Nephron and Urine Formation (Part I) Anatomy of the nephron and juxtaglomerular apparatus. Kidney functions and mechanisms of urine formation, including ultrafiltration and clearance principles.	2
Course #9 – Physiology of the Excretory System – Tubular Processes (Part II) Reabsorption and secretion within the nephron. Role in definitive urine formation, tubulo-glomerular feedback, diuresis, and nitrogenous waste excretion.	2
Course #10 – Physiology of the Excretory System – Regulation (Part III) Mechanisms of urine concentration and dilution, countercurrent system, regulation of renal function, urination process, and kidney's role in acid-base and phospho-calcium balance.	2
Course #11 – Endocrine Pancreas and Hormonal Regulation Function of pancreatic hormones including insulin, glucagon, somatostatin, and others. Their physiological roles, secretion regulation, and clinical relevance. Contributions of Romanian research. Also includes phospho-calcium balance regulation and pineal gland hormones.	2
Course #12 – Sex Hormones and Reproductive Physiology Physiology of male and female sex hormones. Focus on reproductive functions and female physiology outside pregnancy.	2
Course #13 – The Visual Analyzer Structure and physiology of the visual system. Light perception, image processing, and visual pathway functionality.	2
Course #14 – Acoustic-Vestibular Analyzer Anatomy and physiology of the auditory and vestibular systems. Mechanisms of hearing and balance regulation.	2

Laboratory Syllabus	Hours
Laboratory Work #1 – Gastric Secretion – Mechanisms and Clinical Exploration Study of gastric acid secretion, involved cell types, and regulatory mechanisms. Exploration methods include gastric juice collection, stimulation tests (Holander, pentagastrin, histamine), enzymatic activity on proteins, and interpretation of clinical lab results.	2
Laboratory Work #2 – Microscopic and Functional Digestive Investigations Microscopic examination of gastric secretion and stool-based tests for acute hemorrhage (Weber, Adler, Castle-Meyer). Introduction to endoscopy and esophageal pH monitoring in digestive pathology.	2
Laboratory Work #3 – Pancreatic Exocrine Function – Direct and Indirect Tests Exploration of pancreatic secretion through duodeno-pancreatic tubing, blood and urine enzyme dosage, and fat digestion tests (e.g. 131 -labeled triolein). Clinical relevance of steatorrhea and absorption assessment.	2
Laboratory Work #4 – Protein and Lipid Metabolism Assessment of hepatic roles in protein and lipid metabolism via serum electrophoresis, cholesterol subtypes, liver enzymes (ALT, AST, LDH, GGT), and plasma markers. Interpretation of hepatocellular integrity tests.	2
Laboratory Work #5 – Liver and Biliary Function – Secretory Pathways Evaluation of bile production via Meltzer-Lyon duodenal tubing. Overview of bile composition, pigments, salts, and related pathologies (e.g., jaundice). Exploration techniques include pigment recognition reactions and ultrasound.	2
Laboratory Work #6 – Intestinal Digestion and Absorption – Coprological Analysis Tests for lipid and carbohydrate digestion and absorption (e.g. D-xylose, Schilling).	2

Laboratory Syllabus	Hours
Comprehensive fecal analysis including macroscopic, microscopic, pH testing, chemical markers, and Vitamin K assessment.	
Laboratory Work #7 – Seminar and Practical Review I Review and consolidation of topics covered in the first set of practical sessions through group discussion and guided clarification with the course instructor.	2
Laboratory Work #8 – Renal Function – Part I: Urine Formation and Composition Study of urinalysis, diuresis (normo-, poly-, oligo-, anuria), and comparison between plasma and urine content. Assessment of kidney involvement in nitrogen metabolism.	2
Laboratory Work #9 – Renal Function – Part II: Clearance and Filtration Definition and application of renal clearance, with clinical correlations. Analysis of protein catabolism products, proteinuria, glucose, and urine concentration abilities using the Volhard test.	2
Laboratory Work #10 – Renal Function – Part III and Adrenal Function Complete urinalysis and urine sediment study. Functional exploration of the adrenal cortex (17-ketosteroids) and medulla (vanillylmandelic acid dosage, BP monitoring). Diagnostic relevance of indirect and dynamic hormone tests.	2
Laboratory Work #11 – Neuro-Muscular Activity and Thyroid Function Electromyographic analysis of normal neuromuscular activity. Testing for neuromuscular excitability and thyroid function (T3, T4, TSH, iodine capture, reflexograms). Evaluation of fatigue and hormonal influences.	2
Laboratory Work #12 – Nervous System Function – EEG and CSF Analysis Basics of EEG rhythms and brain activity in sleep and wake states. Cerebrospinal fluid examination including sampling, chemical and cytological analysis.	2
Laboratory Work #13 – Seminar and Practical Review II Final practical restoration and recap session. Final clarifications and test preparation for the practical colloquium.	2
Laboratory Work #14 – Practical Colloquium Final assessment covering the entire practical curriculum in physiology. Evaluation is conducted by the lead practical instructor and is mandatory for exam eligibility.	2

Minimum References:
1. Hall JE, Guyton AC. Guyton and Hall Textbook of Medical Physiology. 14th ed. Philadelphia: Elsevier; 2021.
2. Costanzo LS. Physiology. 7th ed. Philadelphia: Elsevier; 2023. (part of the "Board Review Series")
3. Barrett KE, Barman SM, Brooks HL, Yuan JXJ. Ganong's Review of Medical Physiology. 27th ed. New York: McGraw-Hill Education; 2023.
4. Preston RR, Wilson TE. Lippincott Illustrated Reviews: Physiology. 3rd ed. Philadelphia: Wolters Kluwer; 2022.
5. Klabunde RE. Cardiovascular Physiology Concepts. 3rd ed. Philadelphia: Wolters Kluwer; 2021.
6. Teaching support materials

Correlation of the contents of the discipline with the expectations of the representatives of the epistemic community, professional associations and representative employers in the health sector
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How the information is transmitted	
Type of Activity	Teaching methods used

How the information is transmitted	
Lecture	<ul style="list-style-type: none"> • Systematic and structured presentation of the fundamental principles and mechanisms of human physiology, focusing on the functional organization and regulation of major organ systems, delivered through oral exposition and interactive question-and-answer discussions.
Laboratory (Practical Work)	<ul style="list-style-type: none"> • Practical activities involving the investigation and evaluation of physiological functions through experimental methods and functional tests, with emphasis on data analysis and correlation with clinical aspects.

Minimal performance standards – the minimum level of activities that need to be fulfilled by the student during the practical works to be accepted to the final laboratory exam:

- Attendance of at least 70% of all practical sessions, with mandatory completion of all missed activities, including absences recorded during mid-semester evaluations.
- Completion of thematic assignments to support the understanding of fundamental concepts corresponding to each practical session.
- Identification of basic anatomical structures using a variety of educational materials: skeletal models, osteological collections, anatomical specimens, topographic sections, preserved human cadavers, 3D anatomical casts, as well as classical iconography and medical imaging (X-ray, CT, MRI).
- Active and interactive participation during practical sessions, including responses to the instructor's questions, involvement in discussions, and application of theoretical knowledge in practice.
- Use of the virtual dissection table to deepen the understanding of three-dimensional topographical relationships and to correlate findings with classical dissection and imaging techniques.
- Exploration and consolidation of taught concepts through projected digital anatomical atlases (e.g., Netter, Thieme) to enhance visual anatomical learning.

Minimum set of activities that must be performed by the student in the practical exam in order to be admitted to the exam (final verification): obtaining an average of 5 in the practical exams of anatomy and embryology

- Attainment of a minimum average grade of 5 (five) in all practical tests and evaluations conducted throughout the semester.
- Demonstrated ability to identify major anatomical structures using various educational tools: anatomical specimens, dissected cadaveric material, 3D anatomical models, and the virtual dissection table.

Specific conditions for carrying out the theoretical and practical activities of the discipline:

- Active participation of the student in lectures and practical sessions, including attendance at demonstrative activities using the virtual dissection table and projected anatomical atlases.
- Successful completion of colloquia and practical-applied examinations in anatomy and embryology, as mandatory stages in the validation of specific competencies.
- Continuous engagement in the learning process through individual study and teamwork, to ensure the assimilation of fundamental knowledge and the ability to establish anatomo-clinical correlations in an interdisciplinary context.

Consideration points for computing the final score:	Percentage share of scoring (Total = 100%)
- Responses to the final exam	60 %
- Responses to the laboratory examination	15 %
- Periodic checks with written exams	10 %
- Continuous testing through the semester	10 %
- Projects / Translations / Posters / Essays, etc.	-
- Other activities:	5 %
Description of the actual methods of examination – E	
<ul style="list-style-type: none"> • The final examination consists of an oral presentation of three topics randomly selected by the student, one from each of the following categories: <ul style="list-style-type: none"> • Topics from lecture content; • Topics from practical work. • All examination topics are published and communicated to students at the beginning of the semester, ensuring effective and transparent preparation. • The exam is conducted in groups of at least three students, in the presence of the course coordinator, the head of practical activities, and the teaching assistant who supervised the group during the semester. • Students are granted thinking time, and the assessment is carried out in a transparent and supportive environment, allowing for coherent and logical articulation of knowledge. • The choice of oral examination is justified by the nature of the medical profession, where verbal communication is essential, and by the need to assess the student's ability to establish anatomo-clinical correlations. 	
Minimal requirements for grade 5 (or how grade 5 is awarded)	Requirements for grade 10 (or how grade 10 is awarded)
<ul style="list-style-type: none"> • Attendance of at least 70% of practical sessions, with mandatory completion of all missed activities. • Completion of all three colloquia during the semester, with a minimum grade of 5 in at least two of them (colloquia may be retaken if failed). • Submission of practical session assignments and demonstration of knowledge of basic concepts. • Achievement of an average grade of 5 in the practical examinations in anatomy and embryology. • Provision of minimally correct answers to the three oral exam topics, demonstrating understanding of the fundamental requirements of the discipline. 	<ul style="list-style-type: none"> • Achievement of an average grade above 9 in all three colloquia during the semester. • An average above 9 in the practical anatomy and embryology examinations, including accurate anatomical identification and anatomo-clinical justification. • Delivery of coherent, complete, and clinically correlated answers to all three oral exam topics, demonstrating advanced competencies and the ability to synthesize and integrate anatomical knowledge.

Date of completion

15.09.2025

**Discipline Coordinator,
Munteanu Ioana, Lecturer**

**Head of Department,
Ioan Sorin Tudorache, Assoc. Professor, M.D.,
PhD**

**Course Coordinator,
Munteanu Ioana, Lecturer**

**Laboratory Coordinator,
Munteanu Ioana, Lecturer**

**Department Approval Date
18.09.2025**



DISCIPLINE FILE

Faculty	MEDICINE
Department	PRECLINICAL SCIENCES
Field of study	HEALTHCARE
Study cycle	BACHELOR
Study programme	MEDICINE IN ENGLISH

Discipline`s Name	HISTOLOGY (II)				
Didactic position, name and surname of the Discipline Coordinator	Necula Laura, Assoc. Professor				
Didactic position, name and surname for the Course Coordinator	Necula Laura, Assoc. Professor				
Didactic position, name and surname for the Coordinator of the Seminar / Laboratory / Clinical Traineeship	Necula Laura, Assoc. Professor				
Discipline Code	MLE.2.4.10	Formative category of the discipline		FS	
Year of Study	II	Semester	4	Type of the final evaluation (E, V)	E4
Discipline Regime (M -mandatory, E -elective)			M	No. of credits	3

No. of Hours per week	2	Out of which are Course hours:	1	Seminar / Practical Activity / Clinical Stage	1
Total of hours in the curriculum	28	Out of which are Course hours:	14	Seminar / Practical Activity / Clinical Stage	14
		Total hours per semester	75	Total hours of individual study	47

Distribution of time pool per week				Hours
1. Study of the course material				2
2. Study according with the course support, manuals				17
3. Study of the minimal bibliography				2
4. Additional documentation in the library				2
5. Specific activity for the seminary or laboratory				1

Distribution of time pool per week	Hours
6. Homework, translations, etc.	0
7. Preparing for different written exams	1
8. Preparing for oral examinations	0
9. Preparing for the final examination	6
10. Consultations	2
11. In the field documentation	0
12. Documentation from web sources, portals, wiki websites	8
13. Tutoring	2
14. Examinations	2
15. Other activities:	0

Course name	HISTOLOGY (II)
Specific professional competencies	<ul style="list-style-type: none"> Understanding the microscopic structure and organization of tissues and organs of the human body. Identifying histological characteristics of major organ systems, including vascular, endocrine, digestive, respiratory, urinary, and reproductive systems. Interpreting structure–function relationships in tissues and organs based on microscopic morphology. Recognizing normal histological features of organs and correlating them with physiological functions. Applying microscopic examination techniques for the identification of histological structures
Transversal competencies	<ul style="list-style-type: none"> Development of analytical and observational skills in the interpretation of microscopic images and histological preparations. Effective communication of histological findings in academic and clinical learning contexts. Collaboration during laboratory activities and practical microscopic analysis. Demonstration of professional responsibility and ethical conduct in laboratory work. Use of scientific resources, atlases, and digital microscopy tools to support continuous learning.
General objectives of the discipline	<ul style="list-style-type: none"> To provide fundamental knowledge regarding the microscopic structure of organs and systems of the human body. To develop the ability to recognize histological structures and their functional correlations. To familiarize students with microscopic examination techniques used in histological analysis. To establish the basis for understanding normal tissue organization and its relevance for pathology.
Specific objectives of the discipline	<ul style="list-style-type: none"> Identify the histological structure of organs belonging to major physiological systems. Explain the structural organization and functional significance of epithelial, glandular, and specialized tissues.

	<ul style="list-style-type: none"> • Understand microscopic characteristics of endocrine, digestive, respiratory, urinary, and reproductive organs. • Analyze histological preparations and recognize normal tissue architecture. • Develop practical skills in microscopic identification and interpretation of histological specimens.
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Learning Outcomes	
Knowledge	Students identify the microscopic structure of organs and tissues belonging to major human physiological systems, describe the histological organization and cellular composition of endocrine, digestive, respiratory, urinary, and reproductive organs, explain the relationship between histological structure and physiological function in different organ systems.
Skills	Students interpret histological images and microscopic preparations of tissues and organs, analyze structural characteristics of cells and tissues using microscopy and histological atlases, evaluate histological differences between various organs and systems based on microscopic features.
Responsibilities/ Autonomy	Students apply histological knowledge in the interpretation of normal tissue organization and structure–function relationships, practice appropriate laboratory techniques and microscopy methods during histological analysis, use scientific reasoning and critical observation when evaluating microscopic structures and histological data.

Course Syllabus	Hours
Course #1 – The Vascular System Microscopic structure of blood vessels including arteries, veins, and capillaries. Layers of vessel walls and structural adaptations related to function.	1
Course #2 – Endocrine Glands Histological features of major endocrine glands: pituitary, thyroid, parathyroid, adrenal, and pineal glands. Cellular organization and hormone-producing elements.	1
Course #3 – Lymphoid Organs Histological structure of primary and secondary lymphoid organs including the thymus, lymph nodes, spleen, and tonsils. Immune cell distribution and functional zones.	1
Course #4 – The Oral Cavity Microscopic examination of the lips, tongue, and palate. Structural organization of oral mucosa, salivary glands, and dental tissues.	1
Course #5 – Digestive Tract Histology of the esophagus, stomach, small intestine, and colon. Layered organization and specialized cell types for digestion and absorption.	1
Course #6 – Annex Glands of the Digestive System Microscopic anatomy of the liver, pancreas, and gallbladder. Functional correlations between glandular structure and secretion.	1
Course #7 – Respiratory System Histological organization of the nasal cavity, larynx, trachea, bronchi, and lungs. Structure-function relationships in gas exchange and airway conduction.	1

Course Syllabus	Hours
Course #8 – Verification (Partial Examination) Mid-term assessment of the knowledge acquired during the first half of the semester.	1
Course #9 – The Male Genital Tract Microscopic structure of testes, epididymis, vas deferens, seminal vesicles, and prostate. Spermatogenesis and associated glandular functions.	1
Course #10 – The Female Genital Area – Part I Histology of ovaries and fallopian tubes. Follicular development and ovulation.	1
Course #11 – The Female Genital Tract – Part II Microscopic anatomy of the uterus, cervix, and vagina. Cyclical changes in the endometrium and hormonal influences.	1
Course #12 – The Urinary Tract Histological features of the kidneys, ureters, bladder, and urethra. Nephron structure and urinary filtration mechanisms.	1
Course #13 – Sense Organs Histology of the eye, ear, and sensory receptors. Structural adaptations for vision, hearing, balance, taste, and smell.	1
Course #14 – Recapitulation – Semester II Comprehensive review of the semester’s content in preparation for final evaluation.	1

Laboratory Syllabus	Hours
Laboratory Work #1 – Vascular System Microscopic examination of arteries, veins, and capillaries. Identification of structural differences and functional adaptations of the vascular wall.	1
Laboratory Work #2 – Lymphoid Organs Observation of lymph nodes, spleen, thymus, and tonsils. Differentiation of immune cell zones and lymphatic tissue organization.	1
Laboratory Work #3 – Endocrine Glands Study of pituitary, thyroid, adrenal, and other hormone-secreting glands. Recognition of glandular cells and secretory patterns.	1
Laboratory Work #4 – Oral Cavity Microscopic analysis of the lips, tongue, teeth, and associated salivary glands. Examination of different types of oral epithelium.	1
Laboratory Work #5 – Digestive Tube Identification of histological layers of the esophagus, stomach, small and large intestines. Recognition of specialized epithelial and glandular structures.	1
Laboratory Work #6 – Annex Glands Observation of the liver, pancreas, and gallbladder. Recognition of lobular structure, ductal systems, and secretory functions.	1
Laboratory Work #7 – Respiratory Apparatus Study of nasal mucosa, trachea, bronchi, and lungs. Identification of respiratory epithelium and alveolar structures.	1
Laboratory Work #8 – Skin and Its Appendages Examination of the epidermis, dermis, and skin appendages (hair follicles, sebaceous and sweat glands). Recognition of keratinization and pigmentation.	1
Laboratory Work #9 – Male Genitalia Microscopic identification of the testis, epididymis, vas deferens, seminal vesicles, and prostate gland. Analysis of spermatogenesis stages.	1

Laboratory Syllabus	Hours
Laboratory Work #10 – Female Genital Apparatus Observation of ovary, fallopian tube, uterus, cervix, and vagina. Recognition of cyclical histological changes.	1
Laboratory Work #11 – Urinary Apparatus Microscopic study of kidneys, ureters, bladder, and urethra. Identification of nephron structures and urinary epithelium.	1
Laboratory Work #12 – Sense Organs Examination of sensory organs including the eye, inner ear, and sensory receptors. Recognition of specialized sensory structures.	1
Laboratory Work #13 – Communications Session Discussion and clarification of practical material. Review of common challenges and histological features ahead of final assessment.	1
Laboratory Work #14 – Practical Examination Final lab-based assessment covering all organs and systems studied during the semester.	1

Minimum References:
1. Ross MH, Pawlina W. Histology: A Text and Atlas – With Correlated Cell and Molecular Biology. 8th ed. Philadelphia: Wolters Kluwer; 2020.
2. Young B, O'Dowd G, Woodford P. Wheater's Functional Histology: A Text and Colour Atlas. 7th ed. Amsterdam: Elsevier; 2023.
3. Gartner LP, Hiatt JL. Color Textbook of Histology. 5th ed. Philadelphia: Elsevier; 2022.
4. Mescher AL. Junqueira's Basic Histology: Text and Atlas. 16th ed. New York: McGraw-Hill Education; 2021.
5. Stevens A, Lowe JS, Young B. Human Histology. 5th ed. Philadelphia: Elsevier; 2020.
6. Teaching support materials

Correlation of the contents of the discipline with the expectations of the representatives of the epistemic community, professional associations and representative employers in the health sector
•

How the information is transmitted	
Type of Activity	Teaching methods used
Lecture	<ul style="list-style-type: none"> Systematic and structured presentation of the microscopic organization of tissues and organs of the human body, delivered through oral exposition and interactive question-and-answer discussions.
Laboratory (Practical Work)	<ul style="list-style-type: none"> Practical activities involving the microscopic examination and identification of histological structures of tissues and organs using prepared slides and light microscopy, with emphasis on the interpretation of histological features and their functional correlations.

Minimal performance standards – the minimum level of activities that need to be fulfilled by the student during the practical works to be accepted to the final laboratory exam:
<ul style="list-style-type: none"> Attendance of at least 70% of all practical sessions, with mandatory completion of all missed activities, including absences recorded during mid-semester evaluations.

Minimal performance standards – the minimum level of activities that need to be fulfilled by the student during the practical works to be accepted to the final laboratory exam:

- Completion of thematic assignments to support the understanding of fundamental concepts corresponding to each practical session.
- Identification of basic anatomical structures using a variety of educational materials: skeletal models, osteological collections, anatomical specimens, topographic sections, preserved human cadavers, 3D anatomical casts, as well as classical iconography and medical imaging (X-ray, CT, MRI).
- Active and interactive participation during practical sessions, including responses to the instructor’s questions, involvement in discussions, and application of theoretical knowledge in practice.
- Use of the virtual dissection table to deepen the understanding of three-dimensional topographical relationships and to correlate findings with classical dissection and imaging techniques.
- Exploration and consolidation of taught concepts through projected digital anatomical atlases (e.g., Netter, Thieme) to enhance visual anatomical learning.

Minimum set of activities that must be performed by the student in the practical exam in order to be admitted to the exam (final verification): obtaining an average of 5 in the practical exams of anatomy and embryology

- Attainment of a minimum average grade of 5 (five) in all practical tests and evaluations conducted throughout the semester.
- Demonstrated ability to identify major anatomical structures using various educational tools: anatomical specimens, dissected cadaveric material, 3D anatomical models, and the virtual dissection table.

Specific conditions for carrying out the theoretical and practical activities of the discipline:

- Active participation of the student in lectures and practical sessions, including attendance at demonstrative activities using the virtual dissection table and projected anatomical atlases.
- Successful completion of colloquia and practical-applied examinations in anatomy and embryology, as mandatory stages in the validation of specific competencies.
- Continuous engagement in the learning process through individual study and teamwork, to ensure the assimilation of fundamental knowledge and the ability to establish anatomo-clinical correlations in an interdisciplinary context.

Consideration points for computing the final score:	Percentage share of scoring (Total = 100%)
- Responses to the final exam	60 %
- Responses to the laboratory examination	15 %
- Periodic checks with written exams	10 %
- Continuous testing through the semester	10 %
- Projects / Translations / Posters / Essays, etc.	-
- Other activities:	5 %

Description of the actual methods of examination – E

- The final examination consists of an oral presentation of three topics randomly selected by the student, one from each of the following categories:

<ul style="list-style-type: none"> • Topics from lecture content; • Topics from practical work. • All examination topics are published and communicated to students at the beginning of the semester, ensuring effective and transparent preparation. • The exam is conducted in groups of at least three students, in the presence of the course coordinator, the head of practical activities, and the teaching assistant who supervised the group during the semester. • Students are granted thinking time, and the assessment is carried out in a transparent and supportive environment, allowing for coherent and logical articulation of knowledge. • The choice of oral examination is justified by the nature of the medical profession, where verbal communication is essential, and by the need to assess the student's ability to establish anatomo-clinical correlations. 	
Minimal requirements for grade 5 (or how grade 5 is awarded)	Requirements for grade 10 (or how grade 10 is awarded)
<ul style="list-style-type: none"> • Attendance of at least 70% of practical sessions, with mandatory completion of all missed activities. • Completion of all three colloquia during the semester, with a minimum grade of 5 in at least two of them (colloquia may be retaken if failed). • Submission of practical session assignments and demonstration of knowledge of basic concepts. • Achievement of an average grade of 5 in the practical examinations in anatomy and embryology. • Provision of minimally correct answers to the three oral exam topics, demonstrating understanding of the fundamental requirements of the discipline. 	<ul style="list-style-type: none"> • Achievement of an average grade above 9 in all three colloquia during the semester. • An average above 9 in the practical anatomy and embryology examinations, including accurate anatomical identification and anatomo-clinical justification. • Delivery of coherent, complete, and clinically correlated answers to all three oral exam topics, demonstrating advanced competencies and the ability to synthesize and integrate anatomical knowledge.

Date of completion

15.09.2025

**Discipline Coordinator,
Necula Laura, Assoc. Professor**

Head of Department,

**Ioan Sorin Tudorache, Assoc. Professor, M.D.,
PhD**

**Course Coordinator,
Necula Laura, Assoc. Professor**

**Laboratory Coordinator,
Necula Laura, Assoc. Professor**

Department Approval Date

18.09.2025



DISCIPLINE FILE

Faculty	MEDICINE
Department	PRECLINICAL SCIENCES
Field of study	HEALTHCARE
Study cycle	BACHELOR
Study programme	MEDICINE IN ENGLISH

Discipline`s Name	BACTERIOLOGY (II). PARASITOLOGY				
Didactic position, name and surname of the Discipline Coordinator	Mitache Magdalena, Assoc. Professor				
Didactic position, name and surname for the Course Coordinator	Mitache Magdalena, Assoc. Professor				
Didactic position, name and surname for the Coordinator of the Seminar / Laboratory / Clinical Traineeship	Mitache Magdalena, Assoc. Professor				
Discipline Code	MLE.2.4.11	Formative category of the discipline		FS	
Year of Study	II	Semester	4	Type of the final evaluation (E, V)	E4
Discipline Regime (M -mandatory, E -elective)			M	No. of credits	4

No. of Hours per week	4	Out of which are Course hours:	2	Seminar / Practical Activity / Clinical Stage	2
Total of hours in the curriculum	56	Out of which are Course hours:	28	Seminar / Practical Activity / Clinical Stage	28
		Total hours per semester	100	Total hours of individual study	44

Distribution of time pool per week				Hours
1. Study of the course material				2
2. Study according with the course support, manuals				15
3. Study of the minimal bibliography				2
4. Additional documentation in the library				2
5. Specific activity for the seminary or laboratory				2

Distribution of time pool per week	Hours
6. Homework, translations, etc.	0
7. Preparing for different written exams	1
8. Preparing for oral examinations	0
9. Preparing for the final examination	6
10. Consultations	2
11. In the field documentation	0
12. Documentation from web sources, portals, wiki websites	8
13. Tutoring	2
14. Examinations	2
15. Other activities:	0

Course name	BACTERIOLOGY (II). PARASITOLOGY
Specific professional competencies	<ul style="list-style-type: none"> Understanding the taxonomy, morphology, physiology, and pathogenic mechanisms of medically important bacteria and parasites. Identifying the epidemiology, transmission routes, and clinical manifestations of bacterial and parasitic infections. Interpreting microbiological and parasitological diagnostic methods used in clinical laboratories. Recognizing antimicrobial resistance mechanisms and principles of antimicrobial therapy. Applying laboratory techniques for the identification of pathogenic microorganisms and parasites.
Transversal competencies	<ul style="list-style-type: none"> Development of analytical and critical thinking in interpreting microbiological and parasitological data. Effective communication of microbiological findings and infection-related information in academic and clinical contexts. Collaboration in laboratory and clinical team activities related to infectious disease diagnosis. Demonstration of professional responsibility and adherence to biosafety rules in microbiology laboratories. Use of scientific literature and digital resources to support evidence-based learning and professional development.
General objectives of the discipline	<ul style="list-style-type: none"> To provide fundamental knowledge regarding bacterial and parasitic pathogens relevant to human disease. To develop understanding of host–pathogen interactions, infection mechanisms, and epidemiology. To familiarize students with microbiological and parasitological diagnostic techniques used in clinical practice. To establish the basis for understanding infectious diseases and their prevention and control.
Specific objectives of the discipline	<ul style="list-style-type: none"> Identify the main bacterial and parasitic pathogens responsible for human infections. Explain the mechanisms of pathogenicity, host immune response, and microbial resistance. Understand laboratory diagnostic methods for bacterial and parasitic infections.

	<ul style="list-style-type: none"> Analyze epidemiological aspects and transmission routes of infectious agents. Develop practical laboratory skills in microbiological and parasitological identification techniques.
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Learning Outcomes	
Knowledge	Students identify the main bacterial and parasitic pathogens responsible for human infectious diseases, describe the biological characteristics, pathogenic mechanisms, and epidemiological features of medically important microorganisms and parasites, explain the principles of microbiological and parasitological diagnostic methods used in clinical laboratories.
Skills	Students interpret microbiological and parasitological laboratory results obtained through microscopy, culture, serology, and molecular techniques, analyze clinical and epidemiological data related to bacterial and parasitic infections, evaluate diagnostic strategies used for the identification of infectious agents in clinical samples.
Responsibilities/ Autonomy	Students apply microbiological and parasitological knowledge in the interpretation of infectious disease cases, practice biosafety principles and laboratory standards during microbiological investigations, use critical thinking and scientific reasoning when evaluating microbiological data and infection control strategies.

Course Syllabus	Hours
Course #1 – Gram-Positive Cocci: Staphylococcus and Streptococcus Morphology, cultural and biochemical characteristics, resistance traits, antigenic structures, and virulence factors. Diagnostic methods and clinical relevance of <i>Staphylococcus aureus</i> , coagulase-negative staphylococci, <i>Streptococcus pyogenes</i> , <i>Streptococcus pneumoniae</i> , and <i>Enterococcus</i> species. Epidemiology and prophylaxis.	2
Course #2 – Gram-Negative Cocci and Fastidious Pathogens Focus on <i>Neisseria meningitidis</i> and <i>N. gonorrhoeae</i> : morphology, antigenic features, resistance mechanisms, pathogenesis, immunity, treatment, and prevention. Overview of <i>Haemophilus influenzae</i> , <i>H. ducreyi</i> , <i>Bordetella pertussis</i> , and <i>Brucella</i> species.	2
Course #3 – Enterobacteriaceae – Part I: Escherichia, Klebsiella, and Related Genera Morphology, biochemical traits, antigenic structures, and pathogenic mechanisms of <i>Escherichia coli</i> , <i>Klebsiella</i> , <i>Enterobacter</i> , <i>Hafnia</i> , <i>Serratia</i> , <i>Proteus</i> , <i>Providencia</i> , and <i>Morganella</i> . Clinical syndromes and diagnostic principles.	2
Course #4 – Enterobacteriaceae – Part II and Related Pathogens Detailed study of <i>Salmonella</i> , <i>Shigella</i> , <i>Yersinia</i> species (<i>Y. pestis</i> , <i>Y. enterocolitica</i> , <i>Y. pseudotuberculosis</i>), <i>Francisella tularensis</i> , and <i>Pasteurella multocida</i> . Pathogenicity, clinical manifestations, diagnostics, and preventive strategies.	2
Course #5 – Corynebacterium, Listeria, and Gram-Positive Rods Study of <i>Corynebacterium diphtheriae</i> and <i>Listeria monocytogenes</i> : morphology, culture, virulence, and immunoprophylaxis. Overview of non-diphtheric corynebacteria with medical relevance.	2
Course #6 – Spore-Forming Bacteria: Bacillus and Clostridium Characteristics of <i>Bacillus anthracis</i> and non-anthraxis species. Pathogenic clostridia: <i>C. tetani</i> ,	2

Course Syllabus	Hours
<i>C. botulinum</i> , <i>C. difficile</i> , and <i>C. perfringens</i> . Toxin production, disease mechanisms, clinical impact, and prophylaxis.	
Course #7 – Non-Fermentative Gram-Negative Bacilli and Anaerobic Infections Overview of <i>Pseudomonas aeruginosa</i> , <i>Vibrio cholerae</i> , <i>Aeromonas</i> , <i>Plesiomonas</i> , <i>Campylobacter</i> , and <i>Helicobacter</i> . Anaerobic Gram-negative bacilli: <i>Bacteroides</i> , <i>Fusobacterium</i> . Diagnostic strategies and treatment considerations.	2
Course #8 – Legionella, Bartonella, and Spirochetes Study of <i>Legionella pneumophila</i> , <i>Bartonella henselae</i> , and medically important spirochetes (<i>Treponema pallidum</i> , <i>Leptospira</i> , <i>Borrelia</i> spp.). Transmission, pathogenesis, diagnostic tools, and public health relevance.	2
Course #9 – Mycobacteria and Other Atypical Bacteria <i>Mycobacterium tuberculosis</i> , non-tuberculous mycobacteria, and <i>Mycobacterium leprae</i> : morphology, staining, resistance, and treatment protocols. Overview of <i>Rickettsia</i> , <i>Chlamydia</i> , and <i>Mycoplasma</i> : intracellular lifestyles, diagnostic methods, and infections in vulnerable populations.	2
Course #10 – Medically Important Fungi Systematic study of pathogenic fungi: <i>Candida</i> , <i>Cryptococcus</i> , <i>Aspergillus</i> , and others. Morphology, diagnostic methods, resistance patterns, clinical presentations, antifungal therapy, and prophylactic measures.	2
Course #11 – Fundamentals of Parasitology Concepts of parasitism, types of hosts, classification of parasites, and transmission routes. General aspects of parasitic life cycles and host-parasite interactions.	2
Course #12 – Protozoan Parasites: Amoebae, Flagellates, and Hemoflagellates Study of <i>Entamoeba histolytica</i> , <i>Trichomonas vaginalis</i> , and <i>Leishmania</i> spp. Morphology, life cycle, pathology, clinical implications, diagnosis, and control measures.	2
Course #13 – Opportunistic and AIDS-Related Parasitic Infections Focus on protozoa with high pathogenic potential in immunocompromised hosts: <i>Cryptosporidium</i> , <i>Pneumocystis jirovecii</i> , <i>Toxoplasma gondii</i> . Overview of <i>Plasmodium</i> spp. and malaria pathogenesis in vulnerable populations.	2
Course #14 – Helminths: Tapeworms, Flukes, and Roundworms Classification and clinical relevance of helminths: <i>Cestoidea</i> (e.g., <i>Taenia</i> , <i>Echinococcus</i>), <i>Trematoda</i> (e.g., <i>Schistosoma</i> , <i>Fasciola</i>), and <i>Nematoda</i> (e.g., <i>Ascaris</i> , <i>Enterobius</i> , <i>Strongyloides</i>). Diagnostic and therapeutic approaches.	2

Laboratory Syllabus	Hours
Laboratory Work #1 – Laboratory Diagnosis of Gram-Positive Coccal Infections Identification of <i>Staphylococcus</i> and <i>Streptococcus</i> species through culture, staining, biochemical profiling, hemolysis patterns, Lancefield grouping, optochin sensitivity, bile solubility, and antibiotic susceptibility testing. Includes differentiation of <i>Streptococcus pneumoniae</i> and <i>Enterococcus</i> species.	2
Laboratory Work #2 – Laboratory Diagnosis of Gram-Negative Coccal Infections Isolation and identification of <i>Neisseria meningitidis</i> and <i>N. gonorrhoeae</i> . Use of selective media, oxidase testing, antigen detection, and confirmatory techniques.	2
Laboratory Work #3 – Laboratory Diagnosis of Enterobacteriaceae Infections Comprehensive diagnostic methods for <i>E. coli</i> , <i>Klebsiella</i> , <i>Proteus</i> , <i>Yersinia</i> , <i>Salmonella</i> , <i>Shigella</i> , and <i>Pasteurella</i> . Culture characteristics, use of selective media, biochemical tests, and serological confirmation.	2

Laboratory Syllabus	Hours
Laboratory Work #4 – Laboratory Diagnosis of Fastidious Gram-Negative Pathogens Techniques for identifying <i>Haemophilus</i> , <i>Bordetella</i> , <i>Brucella</i> , and <i>Legionella</i> . Use of enriched/selective media and specialized diagnostic assays including serological testing.	2
Laboratory Work #5 – Laboratory Diagnosis of Non-Fermenters and Vibrionaceae Diagnostic protocols for <i>Pseudomonas</i> , <i>Acinetobacter</i> , <i>Vibrio</i> , and <i>Aeromonas</i> . Use of oxidative-fermentative tests, pigment observation, motility assays, and selective media.	2
Laboratory Work #6 – Laboratory Diagnosis of Campylobacter and Helicobacter Infections Cultivation under microaerophilic conditions, identification via biochemical and antigen detection methods. Differentiation of <i>C. jejuni</i> , <i>C. coli</i> , and <i>H. pylori</i> .	2
Laboratory Work #7 – Laboratory Diagnosis of Anaerobic and Spore-Forming Bacteria Diagnostic approaches for <i>Clostridium botulinum</i> , <i>C. tetani</i> , and <i>C. difficile</i> . Use of anaerobic culture techniques, toxin assays, and rapid identification tools.	2
Laboratory Work #8 – Laboratory Diagnosis of Spirochetes and Atypical Bacteria Identification of <i>Treponema</i> , <i>Leptospira</i> , and <i>Borrelia</i> using dark-field microscopy, VDRL, FTA-ABS, and molecular tools. Diagnosis of <i>Rickettsia</i> , <i>Chlamydia</i> , <i>Mycoplasma</i> , and <i>Candida</i> using serology, PCR, and culture.	2
Laboratory Work #9 – Laboratory Diagnosis of Mycobacterial Infections Microscopic examination using Ziehl-Neelsen staining, culture on Löwenstein-Jensen medium, rapid molecular tests, and susceptibility testing for <i>Mycobacterium tuberculosis</i> and atypical species.	2
Laboratory Work #10 – Parasitology – Sample Handling and Stool Examination Collection, preservation, and processing of biological materials for parasitological analysis. Introduction to coproculture techniques and their diagnostic applications.	2
Laboratory Work #11 – Laboratory Identification of Amoebae and Trichomonads Microscopic and culture-based methods for diagnosing <i>Entamoeba histolytica</i> and <i>Trichomonas vaginalis</i> . Morphological differentiation and clinical interpretation.	2
Laboratory Work #12 – Laboratory Diagnosis of Opportunistic and AIDS-Associated Infections Detection of <i>Cryptosporidium</i> , <i>Pneumocystis jirovecii</i> , and <i>Toxoplasma gondii</i> . Emphasis on diagnostic protocols relevant to immunocompromised hosts.	2
Laboratory Work #13 – Microscopic Diagnosis of Malaria and Protozoan Infections Examination of peripheral blood smears for <i>Plasmodium</i> species. Life cycle stages, differential features, and clinical relevance. Morphological identification of other protozoan parasites.	2
Laboratory Work #14 – Helminth Diagnosis and Comprehensive Parasitic Identification Microscopy-based identification of helminths in fecal samples. Recognition of eggs, larvae, and adult forms. Combined diagnostic practice in differentiating protozoan and helminthic infections.	2

Minimum References:
1. Murray PR, Rosenthal KS, Pfaller MA. Medical microbiology . 9th ed. Philadelphia: Elsevier; 2020.
2. Brooks GF, Carroll KC, Butel JS, Morse SA, Mietzner TA. Jawetz, Melnick & Adelberg's medical microbiology . 28th ed. New York: McGraw-Hill Education; 2023.
3. Tortora GJ, Funke BR, Case CL. Microbiology: an introduction . 13th ed. Hoboken (NJ): Wiley; 2020.
4. Roberts LS, Janovy J Jr, Nadler SA. Foundations of parasitology . 10th ed. New York: McGraw-Hill Education; 2021.
5. Teaching support materials

Correlation of the contents of the discipline with the expectations of the representatives of the epistemic community, professional associations and representative employers in the health sector

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How the information is transmitted

Type of Activity	Teaching methods used
Lecture	<ul style="list-style-type: none"> • Systematic and structured presentation of the fundamental principles of bacteriology and parasitology, focusing on the morphology, classification, pathogenic mechanisms, and host–microorganism interactions of medically important bacteria and parasites, delivered through oral exposition and interactive question-and-answer discussions.
Laboratory (Practical Work)	<ul style="list-style-type: none"> • Practical activities involving the observation, identification, and analysis of bacteria and parasites using microbiological and parasitological laboratory techniques, with emphasis on the interpretation of laboratory findings and their clinical relevance.

Minimal performance standards – the minimum level of activities that need to be fulfilled by the student during the practical works to be accepted to the final laboratory exam:

- Attendance of at least 70% of all practical sessions, with mandatory completion of all missed activities, including absences recorded during mid-semester evaluations.
- Completion of thematic assignments to support the understanding of fundamental concepts corresponding to each practical session.
- Identification of basic anatomical structures using a variety of educational materials: skeletal models, osteological collections, anatomical specimens, topographic sections, preserved human cadavers, 3D anatomical casts, as well as classical iconography and medical imaging (X-ray, CT, MRI).
- Active and interactive participation during practical sessions, including responses to the instructor’s questions, involvement in discussions, and application of theoretical knowledge in practice.
- Use of the virtual dissection table to deepen the understanding of three-dimensional topographical relationships and to correlate findings with classical dissection and imaging techniques.
- Exploration and consolidation of taught concepts through projected digital anatomical atlases (e.g., Netter, Thieme) to enhance visual anatomical learning.

Minimum set of activities that must be performed by the student in the practical exam in order to be admitted to the exam (final verification): obtaining an average of 5 in the practical exams of anatomy and embryology

- Attainment of a minimum average grade of 5 (five) in all practical tests and evaluations conducted throughout the semester.
- Demonstrated ability to identify major anatomical structures using various educational tools: anatomical specimens, dissected cadaveric material, 3D anatomical models, and the virtual dissection table.

Specific conditions for carrying out the theoretical and practical activities of the discipline:

- Active participation of the student in lectures and practical sessions, including attendance at demonstrative activities using the virtual dissection table and projected anatomical atlases.
- Successful completion of colloquia and practical-applied examinations in anatomy and embryology, as mandatory stages in the validation of specific competencies.
- Continuous engagement in the learning process through individual study and teamwork, to ensure the assimilation of fundamental knowledge and the ability to establish anatomo-clinical correlations in an interdisciplinary context.

Consideration points for computing the final score:	Percentage share of scoring (Total = 100%)
- Responses to the final exam	60 %
- Responses to the laboratory examination	15 %
- Periodic checks with written exams	10 %
- Continuous testing through the semester	10 %
- Projects / Translations / Posters / Essays, etc.	-
- Other activities:	5 %

Description of the actual methods of examination – E

- The final examination consists of an oral presentation of three topics randomly selected by the student, one from each of the following categories:
 - Topics from lecture content;
 - Topics from practical work.
- All examination topics are published and communicated to students at the beginning of the semester, ensuring effective and transparent preparation.
- The exam is conducted in groups of at least three students, in the presence of the course coordinator, the head of practical activities, and the teaching assistant who supervised the group during the semester.
- Students are granted thinking time, and the assessment is carried out in a transparent and supportive environment, allowing for coherent and logical articulation of knowledge.
- The choice of oral examination is justified by the nature of the medical profession, where verbal communication is essential, and by the need to assess the student's ability to establish anatomo-clinical correlations.

Minimal requirements for grade 5 (or how grade 5 is awarded)	Requirements for grade 10 (or how grade 10 is awarded)
<ul style="list-style-type: none"> • Attendance of at least 70% of practical sessions, with mandatory completion of all missed activities. • Completion of all three colloquia during the semester, with a minimum grade of 5 in at least two of them (colloquia may be retaken if failed). • Submission of practical session assignments and demonstration of knowledge of basic concepts. • Achievement of an average grade of 5 in the practical examinations in anatomy and embryology. 	<ul style="list-style-type: none"> • Achievement of an average grade above 9 in all three colloquia during the semester. • An average above 9 in the practical anatomy and embryology examinations, including accurate anatomical identification and anatomo-clinical justification. • Delivery of coherent, complete, and clinically correlated answers to all three oral exam topics, demonstrating advanced competencies and the ability to synthesize and integrate anatomical knowledge.

- | | |
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| <ul style="list-style-type: none">• Provision of minimally correct answers to the three oral exam topics, demonstrating understanding of the fundamental requirements of the discipline. | |
|--|--|

Date of completion

15.09.2025

**Discipline Coordinator,
Mitache Magdalena, Assoc. Professor**

Head of Department,

**Ioan Sorin Tudorache, Assoc. Professor, M.D.,
PhD**

**Course Coordinator,
Mitache Magdalena, Assoc. Professor**

**Laboratory Coordinator,
Mitache Magdalena, Assoc. Professor**

Department Approval Date

18.09.2025



DISCIPLINE FILE

Faculty	MEDICINE
Department	PRECLINICAL SCIENCES
Field of study	HEALTHCARE
Study cycle	BACHELOR
Study programme	MEDICINE IN ENGLISH

Discipline`s Name	IMMUNOLOGY				
Didactic position, name and surname of the Discipline Coordinator	Comănici Maria Mihaela, Lecturer				
Didactic position, name and surname for the Course Coordinator	Comănici Maria Mihaela, Lecturer				
Didactic position, name and surname for the Coordinator of the Seminar / Laboratory / Clinical Traineeship	Comănici Maria Mihaela, Lecturer				
Discipline Code	MLE.2.4.12	Formative category of the discipline		FS	
Year of Study	II	Semester	4	Type of the final evaluation (E, V)	E4
Discipline Regime (M -mandatory, E -elective)			M	No. of credits	4

No. of Hours per week	4	Out of which are Course hours:	2	Seminar / Practical Activity / Clinical Stage	2
Total of hours in the curriculum	56	Out of which are Course hours:	28	Seminar / Practical Activity / Clinical Stage	28
		Total hours per semester	100	Total hours of individual study	44

Distribution of time pool per week					Hours
1. Study of the course material					2
2. Study according with the course support, manuals					15
3. Study of the minimal bibliography					2
4. Additional documentation in the library					2
5. Specific activity for the seminary or laboratory					2

Distribution of time pool per week	Hours
6. Homework, translations, etc.	0
7. Preparing for different written exams	1
8. Preparing for oral examinations	0
9. Preparing for the final examination	6
10. Consultations	2
11. In the field documentation	0
12. Documentation from web sources, portals, wiki websites	8
13. Tutoring	2
14. Examinations	2
15. Other activities:	0

Course name	IMMUNOLOGY
Specific professional competencies	<ul style="list-style-type: none"> • Understanding the structure, organization, and functions of the immune system and its components. • Identifying mechanisms of innate and adaptive immune responses against pathogens. • Interpreting antigen–antibody interactions and the molecular basis of immune recognition. • Recognizing immunological mechanisms involved in hypersensitivity reactions, immunodeficiencies, and immune regulation. • Applying laboratory techniques used in immunological diagnostics and research
Transversal competencies	<ul style="list-style-type: none"> • Development of analytical and critical thinking in the interpretation of immunological data and experimental results. • Effective communication of immunological concepts in academic and clinical contexts. • Collaboration in laboratory and research activities related to immunological investigations. • Demonstration of professional responsibility and ethical conduct in laboratory work. • Use of scientific literature and digital resources for continuous professional development.
General objectives of the discipline	<ul style="list-style-type: none"> • To provide fundamental knowledge regarding the organization and function of the immune system. • To develop understanding of immune responses to pathogens and mechanisms of immune regulation. • To familiarize students with immunological laboratory methods and diagnostic techniques. • To establish the basis for understanding immunopathology and immune-related diseases.
Specific objectives of the discipline	<ul style="list-style-type: none"> • Identify the cellular and molecular components of the immune system and their functions. • Explain mechanisms of innate and adaptive immune responses. • Understand antigen recognition, antibody production, and immune cell activation.

	<ul style="list-style-type: none"> Analyze immunopathological mechanisms including hypersensitivity and immunodeficiency. Develop basic laboratory skills used in immunological diagnostics and experimental analysis.
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Learning Outcomes	
Knowledge	Students identify the structural and functional components of the immune system and their roles in host defense, describe the mechanisms of innate and adaptive immune responses and antigen recognition, explain the immunological basis of hypersensitivity reactions, immunodeficiencies, and immune regulation.
Skills	Students interpret immunological laboratory results obtained from serological and molecular techniques, analyze antigen–antibody interactions and immune responses in experimental and clinical contexts, evaluate immunological data derived from laboratory techniques such as ELISA, immunofluorescence, electrophoresis, and flow cytometry.
Responsibilities/ Autonomy	Students apply immunological principles in the interpretation of immune responses and immune-related diseases, practice laboratory safety and methodological standards during immunological investigations, perform critical thinking and scientific reasoning when evaluating immunological data and clinical correlations.

Course Syllabus	Hours
Course #1 – Introduction to Immunology and the Immune System Objectives, scope, and structure of immunology. Overview of immune system functions and organization, including central and peripheral lymphoid organs.	2
Course #2 – Antigens and Histocompatibility Complex Definition and properties of antigens. Types of antigens and antigenic determinants. Classification criteria. Structure and function of the Major Histocompatibility Complex (MHC) and histocompatibility antigens.	2
Course #3 – Immune Response and Innate Immunity Stages of the immune response. Nonspecific (innate) immunity: inflammatory responses (acute and chronic), and acute phase proteins in infection.	2
Course #4 – Humoral Mediators of Innate Immunity – The Complement System Structure and activation of the complement cascade. Roles in inflammation, opsonization, cell lysis, and immune regulation.	2
Course #5 – Cytokines and Chemokines Types and functions of interleukins, interferons, tumor necrosis factor (TNF), growth factors, and chemokines in immune regulation and cell communication.	2
Course #6 – Cellular Effectors of Innate Immunity – Granulocytes Functions and mechanisms of action of granulocyte subtypes: neutrophils, eosinophils, and basophils in innate immune defense.	2
Course #7 – Mast Cells, Antigen-Presenting Cells, and NK/K Cells Role of mastocytes and antigen-presenting cells (APCs: macrophages, dendritic cells) in initiating immune responses. Natural killer (NK) and killer (K) cells in immune surveillance.	2

Course Syllabus	Hours
Course #8 – Humoral Immunity – Antibodies Structure, classes, and functions of immunoglobulins (antibodies). Discussion on gammaglobulins and pathological forms of immunoglobulins.	2
Course #9 – Immunoglobulin Synthesis and Antigen-Antibody Interactions Genetic control of immunoglobulin production. Molecular mechanisms underlying antigen-antibody binding and affinity.	2
Course #10 – Cellular Immunity – Lymphocyte Populations B and T lymphocytes: surface markers, functional differences, and activation pathways. Overview of clonal selection and expansion.	2
Course #11 – Antigen Recognition by BCR and TCR Structure and function of B cell and T cell antigen receptors (BCR and TCR). Role of MHC molecules in antigen presentation and T cell activation.	2
Course #12 – Immune Responses to Pathogens Specific immune responses to viruses, bacteria, parasites, and fungi. Key mechanisms of host defense in various infections.	2
Course #13 – Hypersensitivity Reactions Types I–IV hypersensitivity: mechanisms, examples, and immunopathological significance. Allergies, cytotoxicity, immune complex diseases, and delayed-type responses.	2
Course #14 – Hyposensitivity Reactions and Immunodeficiencies Overview of immunodeficient states, immunosuppression, and immune paralysis. Primary and secondary immunodeficiencies and clinical relevance.	2

Laboratory Syllabus	Hours
Laboratory Work #1 – Laboratory Setup and Safety in Immunology Overview of essential equipment and materials for immunological experiments. Protocols for blood sample collection and processing. Emphasis on lab safety and environmental protection measures.	2
Laboratory Work #2 – Antigen–Antibody Reaction Theoretical basis of the Ag–Ab interaction. Exploration of epitope–paratope binding and immune complex formation. Illustrated via PowerPoint presentation.	2
Laboratory Work #3 – Precipitation Reactions Execution of tube precipitation and gel-based precipitation techniques (agar or agarose). Introduction to Mancini’s Single Radial Immunodiffusion (IDSR) method.	2
Laboratory Work #4 – Quantitative Applications of IDSR Laboratory practice in the quantification of immunoglobulins (IgA, IgM, IgG) and complement component C3 using the IDSR technique.	2
Laboratory Work #5 – Agglutination Reactions Performance of latex-agglutination tests for rheumatoid factor, C-reactive protein (CRP), and anti-streptolysin O (ASLO) detection.	2
Laboratory Work #6 – Hemagglutination Reactions Application of ABO blood grouping through agglutination techniques. Understanding the immunological basis of blood compatibility.	2
Laboratory Work #7 – Electrophoretic Techniques Use of serum protein electrophoresis, immunoelectrophoresis, SDS-PAGE, and Western blotting to separate and identify proteins and immunological components.	2
Laboratory Work #8 – ELISA – Interleukin 6 Quantification Practice in immunoenzymatic techniques using ELISA to quantitatively measure IL-6 in serum or plasma samples.	2

Laboratory Syllabus	Hours
Laboratory Work #9 – ELISA – TNF-α Quantification Application of ELISA for the detection and measurement of Tumor Necrosis Factor alpha (TNF- α) in biological fluids.	2
Laboratory Work #10 – Immunofluorescence and Radioimmunoassay (RIA) Introduction to direct and indirect immunofluorescence techniques. Overview of RIA as a method for quantifying antigens and antibodies.	2
Laboratory Work #11 – Flow Cytometry – Antigenic Marker Detection Use of flow cytometry to identify cell populations based on specific surface markers. Analysis and interpretation of results.	2
Laboratory Work #12 – Intracellular Cytokine Detection via Flow Cytometry Techniques for stimulating whole blood cultures and measuring intracellular cytokines using flow cytometry.	2
Laboratory Work #13 – Cellular Immunity Assessment Practical testing of neutrophil function as part of cell-mediated immunity evaluations. Overview of diagnostic methods.	2
Laboratory Work #14 – PCR – Enzymatic Amplification Technique Introduction to the principles and steps of the Polymerase Chain Reaction (PCR). Hands-on application for amplification and detection of target DNA.	2

Minimum References:

1. Abbas AK, Lichtman AH, Pillai S. **Cellular and molecular immunology**. 10th ed. Philadelphia: Elsevier; 2021.
2. Murphy K, Weaver C. **Janeway's immunobiology**. 10th ed. New York: Garland Science; 2022.
3. Delves PJ, Martin SJ, Burton DR, Roitt IM. **Roitt's essential immunology**. 13th ed. Hoboken (NJ): Wiley-Blackwell; 2023.
4. Parham P. **The immune system**. 5th ed. New York: Garland Science; 2021.
5. Teaching support materials

Correlation of the contents of the discipline with the expectations of the representatives of the epistemic community, professional associations and representative employers in the health sector

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How the information is transmitted

Type of Activity	Teaching methods used
Lecture	<ul style="list-style-type: none"> • Systematic and structured presentation of the fundamental principles of immunology, focusing on the organization and function of the immune system, immune responses, and mechanisms involved in immunity and immunopathology, delivered through oral exposition and interactive question-and-answer discussions.
Laboratory (Practical Work)	<ul style="list-style-type: none"> • Practical activities involving the study and analysis of immunological reactions and laboratory techniques used in immunological investigations, with emphasis on the interpretation of laboratory results and their clinical relevance.

Minimal performance standards – the minimum level of activities that need to be fulfilled by the student during the practical works to be accepted to the final laboratory exam:

- Attendance of at least 70% of all practical sessions, with mandatory completion of all missed activities, including absences recorded during mid-semester evaluations.
- Completion of thematic assignments to support the understanding of fundamental concepts corresponding to each practical session.
- Identification of basic anatomical structures using a variety of educational materials: skeletal models, osteological collections, anatomical specimens, topographic sections, preserved human cadavers, 3D anatomical casts, as well as classical iconography and medical imaging (X-ray, CT, MRI).
- Active and interactive participation during practical sessions, including responses to the instructor’s questions, involvement in discussions, and application of theoretical knowledge in practice.
- Use of the virtual dissection table to deepen the understanding of three-dimensional topographical relationships and to correlate findings with classical dissection and imaging techniques.
- Exploration and consolidation of taught concepts through projected digital anatomical atlases (e.g., Netter, Thieme) to enhance visual anatomical learning.

Minimum set of activities that must be performed by the student in the practical exam in order to be admitted to the exam (final verification): obtaining an average of 5 in the practical exams of anatomy and embryology

- Attainment of a minimum average grade of 5 (five) in all practical tests and evaluations conducted throughout the semester.
- Demonstrated ability to identify major anatomical structures using various educational tools: anatomical specimens, dissected cadaveric material, 3D anatomical models, and the virtual dissection table.

Specific conditions for carrying out the theoretical and practical activities of the discipline:

- Active participation of the student in lectures and practical sessions, including attendance at demonstrative activities using the virtual dissection table and projected anatomical atlases.
- Successful completion of colloquia and practical-applied examinations in anatomy and embryology, as mandatory stages in the validation of specific competencies.
- Continuous engagement in the learning process through individual study and teamwork, to ensure the assimilation of fundamental knowledge and the ability to establish anatomo-clinical correlations in an interdisciplinary context.

Consideration points for computing the final score:	Percentage share of scoring (Total = 100%)
- Responses to the final exam	60 %
- Responses to the laboratory examination	15 %
- Periodic checks with written exams	10 %
- Continuous testing through the semester	10 %
- Projects / Translations / Posters / Essays, etc.	-
- Other activities:	5 %

Description of the actual methods of examination – E

<ul style="list-style-type: none"> • The final examination consists of an oral presentation of three topics randomly selected by the student, one from each of the following categories: <ul style="list-style-type: none"> • Topics from lecture content; • Topics from practical work. • All examination topics are published and communicated to students at the beginning of the semester, ensuring effective and transparent preparation. • The exam is conducted in groups of at least three students, in the presence of the course coordinator, the head of practical activities, and the teaching assistant who supervised the group during the semester. • Students are granted thinking time, and the assessment is carried out in a transparent and supportive environment, allowing for coherent and logical articulation of knowledge. • The choice of oral examination is justified by the nature of the medical profession, where verbal communication is essential, and by the need to assess the student's ability to establish anatomo-clinical correlations. 	
Minimal requirements for grade 5 (or how grade 5 is awarded)	Requirements for grade 10 (or how grade 10 is awarded)
<ul style="list-style-type: none"> • Attendance of at least 70% of practical sessions, with mandatory completion of all missed activities. • Completion of all three colloquia during the semester, with a minimum grade of 5 in at least two of them (colloquia may be retaken if failed). • Submission of practical session assignments and demonstration of knowledge of basic concepts. • Achievement of an average grade of 5 in the practical examinations in anatomy and embryology. • Provision of minimally correct answers to the three oral exam topics, demonstrating understanding of the fundamental requirements of the discipline. 	<ul style="list-style-type: none"> • Achievement of an average grade above 9 in all three colloquia during the semester. • An average above 9 in the practical anatomy and embryology examinations, including accurate anatomical identification and anatomo-clinical justification. • Delivery of coherent, complete, and clinically correlated answers to all three oral exam topics, demonstrating advanced competencies and the ability to synthesize and integrate anatomical knowledge.

Date of completion

15.09.2025

**Discipline Coordinator,
Comănici Maria Mihaela, Lecturer**

**Head of Department,
Ioan Sorin Tudorache, Assoc. Professor, M.D.,
PhD**

**Course Coordinator,
Comănici Maria Mihaela, Lecturer**

**Laboratory Coordinator,
Comănici Maria Mihaela, Lecturer**

Department Approval Date

18.09.2025



DISCIPLINE FILE

Faculty	MEDICINE
Department	PRECLINICAL SCIENCES
Field of study	HEALTHCARE
Study cycle	BACHELOR
Study programme	MEDICINE IN ENGLISH

Discipline`s Name	MEDICAL DEONTOLOGY. BIOETHICS				
Didactic position, name and surname of the Discipline Coordinator	Nemeş Roxana Maria, Proffesor, M.D., PhD				
Didactic position, name and surname for the Course Coordinator	Nemeş Roxana Maria, Proffesor, M.D., PhD				
Didactic position, name and surname for the Coordinator of the Seminar / Laboratory / Clinical Traineeship	-				
Discipline Code	MLE.2.4.13	Formative category of the discipline		CS	
Year of Study	II	Semester	4	Type of the final evaluation (E, V)	V4
Discipline Regime (M -mandatory, E -elective)			M	No. of credits	2

No. of Hours per week	1	Out of which are Course hours:	1	Seminar / Practical Activity / Clinical Stage	-
Total of hours in the curriculum	14	Out of which are Course hours:	14	Seminar / Practical Activity / Clinical Stage	-
		Total hours per semester	50	Total hours of individual study	36

Distribution of time pool per week	Hours
1. Study of the course material	2
2. Study according with the course support, manuals	13
3. Study of the minimal bibliography	2
4. Additional documentation in the library	2
5. Specific activity for the seminary or laboratory	0

Distribution of time pool per week	Hours
6. Homework, translations, etc.	0
7. Preparing for different written exams	1
8. Preparing for oral examinations	0
9. Preparing for the final examination	5
10. Consultations	2
11. In the field documentation	0
12. Documentation from web sources, portals, wiki websites	6
13. Tutoring	2
14. Examinations	2
15. Other activities:	0

Course name	MEDICAL DEONTOLOGY. BIOETHICS
Specific professional competencies	<ul style="list-style-type: none"> • Understanding the ethical principles governing medical practice and the doctor–patient relationship. • Identifying the normative frameworks and ethical guidelines regulating professional medical conduct. • Interpreting ethical dilemmas arising in clinical practice, medical research, and public health contexts. • Applying principles of confidentiality, informed consent, and professional responsibility in medical practice. • Recognizing ethical challenges related to biomedical research, organ transplantation, reproductive medicine, and end-of-life care.
Transversal competencies	<ul style="list-style-type: none"> • Development of ethical reasoning and critical thinking in addressing complex medical situations. • Effective communication of ethical considerations in clinical decision-making. • Respect for patient autonomy, dignity, and human rights in healthcare contexts. • Collaboration with healthcare professionals in ethically challenging situations. • Promotion of professional integrity, responsibility, and ethical conduct in medical practice.
General objectives of the discipline	<ul style="list-style-type: none"> • To introduce the fundamental principles and concepts of medical ethics and bioethics. • To develop ethical reasoning and responsible decision-making in medical practice. • To familiarize students with the normative documents and ethical standards guiding medical conduct. • To promote respect for patient rights, professional responsibility, and ethical medical practice.
Specific objectives of the discipline	<ul style="list-style-type: none"> • Identify the historical development and conceptual foundations of bioethics and medical deontology. • Explain the core principles of biomedical ethics: autonomy, beneficence, non-maleficence, and justice. • Understand ethical issues related to confidentiality, informed consent, and patient rights.

	<ul style="list-style-type: none"> Analyze ethical dilemmas encountered in clinical practice and biomedical research. Recognize ethical considerations in organ transplantation, reproductive medicine, and end-of-life care.
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Learning Outcomes	
Knowledge	Students identify the fundamental concepts and principles of medical deontology and bioethics, describe the ethical frameworks and normative documents regulating medical practice and biomedical research, explain the ethical implications of confidentiality, informed consent, and patient autonomy in healthcare.
Skills	Students interpret ethical dilemmas encountered in clinical practice and biomedical research, analyze ethical principles and professional guidelines in relation to clinical decision-making, evaluate complex medical situations using structured ethical reasoning.
Responsibilities/ Autonomy	Students apply ethical principles and professional standards in clinical and research contexts, respect for patient autonomy, dignity, and confidentiality in medical practice, ethical reasoning and professional responsibility when addressing complex medical decisions.

Course Syllabus	Hours
Course #1. Bioethics and Medical Ethics – Definitions and Historical Overview Introduction to the concepts of bioethics and medical ethics. Historical development and key milestones in the evolution of ethical thinking in medicine.	1
Course #2. Bioethical Principles in Medical Practice Core ethical principles guiding clinical care: autonomy, beneficence, non-maleficence, and justice. Application in daily medical decision-making.	1
Course #3. Professional Confidentiality and Secrecy Ethical and legal aspects of confidentiality in the doctor-patient relationship. Conditions under which confidentiality may be breached.	1
Course #4. Moral and Legal Values in the Nurse–Patient Relationship Discussion of ethical conduct, respect, dignity, and communication within the nurse-patient dynamic. Legal responsibilities and patient rights.	1
Course #5. Informed Consent Definition and essential elements of informed consent. Ethical obligations and practical implementation in clinical settings.	1
Course #6. Medical Research on Human Subjects Ethical considerations in clinical research. Protection of participants, informed consent, and research oversight bodies.	1
Course #7. Ethical Dilemmas in Medicine Approach to resolving complex ethical conflicts in medical practice. Case-based discussion of real-life dilemmas.	1
Course #8. Beneficence and Non-Maleficence Examination of the duty to help and the duty to avoid harm. Clinical examples of balancing benefit versus risk.	1

Course Syllabus	Hours
Course #9. Professional Decision-Making in Medicine The ethical mechanism behind clinical decision-making. Evaluation of benefit-risk ratios in therapeutic interventions.	1
Course #10. Medical Ethics Normative Documents – Classical Texts Study of foundational ethical documents including the Hippocratic Oath, the Geneva Declaration, and the Romanian College of Physicians' Code of Conduct.	1
Course #11. Medical Ethics Normative Documents – Modern Frameworks Review of the Helsinki Declaration and Belmont Report. Principles and guidelines for ethical research and clinical care.	1
Course #12. Ethics of Organ Transplantation Ethical challenges and regulations concerning organ donation and transplantation. Consent, allocation, and equity.	1
Course #13. Ethics of Conception, Sterilization, and Abortion Discussion of reproductive ethics, including birth control, sterilization, and abortion. Moral, legal, and societal perspectives.	1
Course #14. Euthanasia, Assisted Suicide, and Palliative Care Ethical and legal debates surrounding end-of-life care. Differentiation between euthanasia, assisted suicide, and the ethics of palliative medicine.	1

Minimum References:
1. Beauchamp TL, Childress JF. Principles of biomedical ethics . 8th ed. New York: Oxford University Press; 2019.
2. British Medical Association. Medical ethics today: the BMA's handbook of ethics and law . 4th ed. Chichester: Wiley-Blackwell; 2020.
3. Vaughn L. Bioethics: principles, issues, and cases . 4th ed. New York: Oxford University Press; 2020.
4. Savulescu J, Wilkinson D, editors. Ethics and law for doctors . 2nd ed. London: Bloomsbury Academic; 2022.
5. Teaching support materials

Correlation of the contents of the discipline with the expectations of the representatives of the epistemic community, professional associations and representative employers in the health sector
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How the information is transmitted	
Type of Activity	Teaching methods used
Lecture	<ul style="list-style-type: none"> Systematic and structured presentation of the fundamental principles of medical deontology and bioethics, focusing on ethical standards, professional responsibilities, and decision-making in medical practice, delivered through oral exposition and interactive question-and-answer discussions.
Laboratory (Practical Work)	<ul style="list-style-type: none">

Minimal performance standards – the minimum level of activities that need to be fulfilled by the student during the practical works to be accepted to the final laboratory exam:
<ul style="list-style-type: none"> Attendance of at least 70% of all practical sessions, with mandatory completion of all missed activities, including absences recorded during mid-semester evaluations.

Minimal performance standards – the minimum level of activities that need to be fulfilled by the student during the practical works to be accepted to the final laboratory exam:

- Completion of thematic assignments to support the understanding of fundamental concepts corresponding to each practical session.
- Identification of basic anatomical structures using a variety of educational materials: skeletal models, osteological collections, anatomical specimens, topographic sections, preserved human cadavers, 3D anatomical casts, as well as classical iconography and medical imaging (X-ray, CT, MRI).
- Active and interactive participation during practical sessions, including responses to the instructor’s questions, involvement in discussions, and application of theoretical knowledge in practice.
- Use of the virtual dissection table to deepen the understanding of three-dimensional topographical relationships and to correlate findings with classical dissection and imaging techniques.
- Exploration and consolidation of taught concepts through projected digital anatomical atlases (e.g., Netter, Thieme) to enhance visual anatomical learning.

Minimum set of activities that must be performed by the student in the practical exam in order to be admitted to the exam (final verification): obtaining an average of 5 in the practical exams of anatomy and embryology

- Attainment of a minimum average grade of 5 (five) in all practical tests and evaluations conducted throughout the semester.
- Demonstrated ability to identify major anatomical structures using various educational tools: anatomical specimens, dissected cadaveric material, 3D anatomical models, and the virtual dissection table.

Specific conditions for carrying out the theoretical and practical activities of the discipline:

- Active participation of the student in lectures and practical sessions, including attendance at demonstrative activities using the virtual dissection table and projected anatomical atlases.
- Successful completion of colloquia and practical-applied examinations in anatomy and embryology, as mandatory stages in the validation of specific competencies.
- Continuous engagement in the learning process through individual study and teamwork, to ensure the assimilation of fundamental knowledge and the ability to establish anatomo-clinical correlations in an interdisciplinary context.

Consideration points for computing the final score:	Percentage share of scoring (Total = 100%)
- Responses to the final exam	60 %
- Responses to the laboratory examination	15 %
- Periodic checks with written exams	10 %
- Continuous testing through the semester	10 %
- Projects / Translations / Posters / Essays, etc.	-
- Other activities:	5 %

Description of the actual methods of examination – E

- The final examination consists of an oral presentation of three topics randomly selected by the student, one from each of the following categories:

<ul style="list-style-type: none"> • Topics from lecture content; • Topics from practical work. <ul style="list-style-type: none"> • All examination topics are published and communicated to students at the beginning of the semester, ensuring effective and transparent preparation. • The exam is conducted in groups of at least three students, in the presence of the course coordinator, the head of practical activities, and the teaching assistant who supervised the group during the semester. • Students are granted thinking time, and the assessment is carried out in a transparent and supportive environment, allowing for coherent and logical articulation of knowledge. • The choice of oral examination is justified by the nature of the medical profession, where verbal communication is essential, and by the need to assess the student's ability to establish anatomo-clinical correlations. 	
Minimal requirements for grade 5 (or how grade 5 is awarded)	Requirements for grade 10 (or how grade 10 is awarded)
<ul style="list-style-type: none"> • Attendance of at least 70% of practical sessions, with mandatory completion of all missed activities. • Completion of all three colloquia during the semester, with a minimum grade of 5 in at least two of them (colloquia may be retaken if failed). • Submission of practical session assignments and demonstration of knowledge of basic concepts. • Achievement of an average grade of 5 in the practical examinations in anatomy and embryology. • Provision of minimally correct answers to the three oral exam topics, demonstrating understanding of the fundamental requirements of the discipline. 	<ul style="list-style-type: none"> • Achievement of an average grade above 9 in all three colloquia during the semester. • An average above 9 in the practical anatomy and embryology examinations, including accurate anatomical identification and anatomo-clinical justification. • Delivery of coherent, complete, and clinically correlated answers to all three oral exam topics, demonstrating advanced competencies and the ability to synthesize and integrate anatomical knowledge.

Date of completion

16.09.2025

Discipline Coordinator,

Nemeş Roxana Maria, Proffesor, M.D., PhD

Head of Department,

**Ioan Sorin Tudorache, Assoc. Professor, M.D.,
PhD**

Course Coordinator,

Nemeş Roxana Maria, Proffesor, M.D., PhD

Laboratory Coordinator,

Department Approval Date

18.09.2025



DISCIPLINE FILE

Faculty	MEDICINE
Department	PRECLINICAL SCIENCES
Field of study	HEALTHCARE
Study cycle	BACHELOR
Study programme	MEDICINE IN ENGLISH

Discipline`s Name	MEDICAL SPECIALIZED COMMUNICATION IN MODERN (ROMANIAN) FOREIGN LANGUAGES (II)				
Didactic position, name and surname of the Discipline Coordinator	-				
Didactic position, name and surname for the Course Coordinator	-				
Didactic position, name and surname for the Coordinator of the Seminar / Laboratory / Clinical Traineeship	Buză Iulia, Lecturer				
Discipline Code	MLE.2.4.14	Formative category of the discipline		CS	
Year of Study	II	Semester	4	Type of the final evaluation (E, V)	C4
Discipline Regime (M-mandatory, E-elective)			M	No. of credits	2

No. of Hours per week	1	Out of which are Course hours:	-	Seminar / Practical Activity / Clinical Stage	1
Total of hours in the curriculum	14	Out of which are Course hours:	-	Seminar / Practical Activity / Clinical Stage	14
		Total hours per semester	50	Total hours of individual study	36

Distribution of time pool per week				Hours
1. Study of the course material				2
2. Study according with the course support, manuals				12
3. Study of the minimal bibliography				2
4. Additional documentation in the library				2
5. Specific activity for the seminary or laboratory				1

Distribution of time pool per week	Hours
6. Homework, translations, etc.	0
7. Preparing for different written exams	1
8. Preparing for oral examinations	0
9. Preparing for the final examination	5
10. Consultations	2
11. In the field documentation	0
12. Documentation from web sources, portals, wiki websites	6
13. Tutoring	2
14. Examinations	2
15. Other activities:	0

Course name	MEDICAL SPECIALIZED COMMUNICATION IN MODERN (ROMANIAN) FOREIGN LANGUAGES (II)
Specific professional competencies	<ul style="list-style-type: none"> • Understanding the terminology and linguistic structures used in medical communication in Romanian. • Identifying vocabulary related to symptoms, investigations, treatments, and disease prevention. • Interpreting medical information and patient descriptions in clinical communication contexts. • Conducting basic medical dialogues in Romanian during patient interviews and clinical interactions. • Communicating diagnostic and therapeutic information clearly and appropriately to patients.
Transversal competencies	<ul style="list-style-type: none"> • Development of effective interpersonal communication skills in healthcare environments. • Demonstration of empathy and patient-centered communication during medical interactions. • Collaboration with healthcare professionals using appropriate professional language. • Respect for ethical principles such as confidentiality, informed consent, and professional conduct. • Continuous improvement of linguistic and intercultural competence in medical contexts.
General objectives of the discipline	<ul style="list-style-type: none"> • To develop Romanian language communication skills necessary for clinical interaction with patients and healthcare professionals. • To familiarize students with medical terminology used in everyday clinical practice. • To improve the ability to conduct patient interviews and explain medical information clearly. • To promote effective and empathetic communication in healthcare settings.
Specific objectives of the discipline	<ul style="list-style-type: none"> • Identify and use medical vocabulary related to symptoms, diagnosis, treatment, and prevention. • Practice patient–doctor communication scenarios in Romanian. • Develop the ability to conduct structured medical history interviews.

	<ul style="list-style-type: none"> • Improve communication skills in explaining diagnoses, procedures, and treatment recommendations. • Understand ethical aspects of medical communication with patients.
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Learning Outcomes	
Knowledge	Students identify Romanian medical terminology related to symptoms, investigations, treatment, and disease prevention, describe the structure and language used in patient interviews and clinical communication, explain the principles of effective and ethical communication in medical practice.
Skills	Students interpret patient descriptions of symptoms and clinical information communicated in Romanian. analyze medical communication scenarios involving diagnosis, treatment explanation, and patient counseling, perform structured patient interviews and clinical dialogues using appropriate medical vocabulary.
Responsibilities/ Autonomy	Students apply Romanian medical terminology during patient interviews and clinical communication, ethical principles and empathetic communication when interacting with patients, effective communication strategies when explaining diagnoses, investigations, and treatment recommendations.

Laboratory Syllabus	Hours
Laboratory Work #1. Medical and Paramedical Personnel and Places Vocabulary and communication exercises focused on identifying healthcare professionals and medical settings. Practice in role-based dialogue.	1
Laboratory Work #2. Symptoms and Signs of Ailments Describing and interpreting common symptoms and clinical signs in Romanian. Patient-provider interaction scenarios.	1
Laboratory Work #3. Basic Investigations Language practice around common diagnostic tools and procedures. Vocabulary for imaging, physical exams, and initial evaluations.	1
Laboratory Work #4. Laboratory Tests Terminology and communication related to lab analyses and interpretation of results. Simulated patient explanations.	1
Laboratory Work #5. Disease Treatment Expressing treatment plans, therapeutic procedures, and medication instructions. Focus on clarity and patient understanding.	1
Laboratory Work #6. Disease Prevention Vocabulary and discussion practice around vaccination, hygiene, screenings, and health promotion strategies.	1
Laboratory Work #7. Epidemiology Key terms and expressions for discussing public health, outbreaks, and infectious disease control in Romanian.	1
Laboratory Work #8. Medical Ethics Basic ethical concepts and phrases related to confidentiality, consent, and respectful communication.	1

Laboratory Syllabus	Hours
Laboratory Work #9. Medical Research Terminology and discussions related to research settings, study types, and participation in clinical trials.	1
Laboratory Work #10. Taking a Medical History – Part I Practice in patient interviews: identifying personal and family history, lifestyle habits, and present complaints.	1
Laboratory Work #11. Taking a Medical History – Part II Continued dialogue practice focusing on systemic review and chronology of symptoms.	1
Laboratory Work #12. Physical and Mental Examination Descriptive language and expressions used in physical and psychological assessments. Patient interaction simulations.	1
Laboratory Work #13. Explaining Diagnosis and Delivering Bad News Communication strategies for discussing diagnoses and difficult news with empathy and professionalism.	1
Laboratory Work #14. Final Revision Comprehensive review and conversational practice covering all topics from the semester. Preparation for assessment.	1

Minimum References:
1. Murar I, Nagy E. Romanian for Foreign Medical Students: Language and Communication Skills in Clinical Contexts. 2nd ed. Cluj-Napoca: Casa Cărții de Știință; 2021.
2. Păcurar A, Toma I. Romanian for Medical Purposes: A Practical Course for Foreign Students. 1st ed. Iași: Editura Universității „Grigore T. Popa” din Iași; 2020.
3. Tănase D, Dănilă C. Romanian Language for Medical Students: Vocabulary and Communication. 1st ed. Bucharest: Editura Universitară Carol Davila; 2022.
4. Chabner DE. The Language of Medicine. 12th ed. St. Louis, MO: Elsevier; 2021.
5. Glendinning E, Holmström B. English in Medicine: A Course in Communication Skills. 3rd ed. Cambridge: Cambridge University Press; 2020.
6. Teaching support materials

Correlation of the contents of the discipline with the expectations of the representatives of the epistemic community, professional associations and representative employers in the health sector
•

How the information is transmitted	
Type of Activity	Teaching methods used
Lecture	•
Laboratory (Practical Work)	• Practical activities aimed at developing communication skills in Romanian for medical practice through structured exercises, analysis of medical texts, and simulated doctor–patient interactions in clinical scenarios.

Minimal performance standards – the minimum level of activities that need to be fulfilled by the student during the practical works to be accepted to the final laboratory exam:
• Attendance of at least 70% of all practical sessions, with mandatory completion of all missed activities, including absences recorded during mid-semester evaluations.

Minimal performance standards – the minimum level of activities that need to be fulfilled by the student during the practical works to be accepted to the final laboratory exam:

- Completion of thematic assignments to support the understanding of fundamental concepts corresponding to each practical session.
- Identification of basic anatomical structures using a variety of educational materials: skeletal models, osteological collections, anatomical specimens, topographic sections, preserved human cadavers, 3D anatomical casts, as well as classical iconography and medical imaging (X-ray, CT, MRI).
- Active and interactive participation during practical sessions, including responses to the instructor’s questions, involvement in discussions, and application of theoretical knowledge in practice.
- Use of the virtual dissection table to deepen the understanding of three-dimensional topographical relationships and to correlate findings with classical dissection and imaging techniques.
- Exploration and consolidation of taught concepts through projected digital anatomical atlases (e.g., Netter, Thieme) to enhance visual anatomical learning.

Minimum set of activities that must be performed by the student in the practical exam in order to be admitted to the exam (final verification): obtaining an average of 5 in the practical exams of anatomy and embryology

- Attainment of a minimum average grade of 5 (five) in all practical tests and evaluations conducted throughout the semester.
- Demonstrated ability to identify major anatomical structures using various educational tools: anatomical specimens, dissected cadaveric material, 3D anatomical models, and the virtual dissection table.

Specific conditions for carrying out the theoretical and practical activities of the discipline:

- Active participation of the student in lectures and practical sessions, including attendance at demonstrative activities using the virtual dissection table and projected anatomical atlases.
- Successful completion of colloquia and practical-applied examinations in anatomy and embryology, as mandatory stages in the validation of specific competencies.
- Continuous engagement in the learning process through individual study and teamwork, to ensure the assimilation of fundamental knowledge and the ability to establish anatomo-clinical correlations in an interdisciplinary context.

Consideration points for computing the final score:	Percentage share of scoring (Total = 100%)
- Responses to the final exam	60 %
- Responses to the laboratory examination	15 %
- Periodic checks with written exams	10 %
- Continuous testing through the semester	10 %
- Projects / Translations / Posters / Essays, etc.	-
- Other activities:	5 %

Description of the actual methods of examination – E

- The final examination consists of an oral presentation of three topics randomly selected by the student, one from each of the following categories:

<ul style="list-style-type: none"> • Topics from lecture content; • Topics from practical work. • All examination topics are published and communicated to students at the beginning of the semester, ensuring effective and transparent preparation. • The exam is conducted in groups of at least three students, in the presence of the course coordinator, the head of practical activities, and the teaching assistant who supervised the group during the semester. • Students are granted thinking time, and the assessment is carried out in a transparent and supportive environment, allowing for coherent and logical articulation of knowledge. • The choice of oral examination is justified by the nature of the medical profession, where verbal communication is essential, and by the need to assess the student's ability to establish anatomo-clinical correlations. 	
Minimal requirements for grade 5 (or how grade 5 is awarded)	Requirements for grade 10 (or how grade 10 is awarded)
<ul style="list-style-type: none"> • Attendance of at least 70% of practical sessions, with mandatory completion of all missed activities. • Completion of all three colloquia during the semester, with a minimum grade of 5 in at least two of them (colloquia may be retaken if failed). • Submission of practical session assignments and demonstration of knowledge of basic concepts. • Achievement of an average grade of 5 in the practical examinations in anatomy and embryology. • Provision of minimally correct answers to the three oral exam topics, demonstrating understanding of the fundamental requirements of the discipline. 	<ul style="list-style-type: none"> • Achievement of an average grade above 9 in all three colloquia during the semester. • An average above 9 in the practical anatomy and embryology examinations, including accurate anatomical identification and anatomo-clinical justification. • Delivery of coherent, complete, and clinically correlated answers to all three oral exam topics, demonstrating advanced competencies and the ability to synthesize and integrate anatomical knowledge.

Date of completion

16.09.2025

Discipline Coordinator,

Head of Department,

**Ioan Sorin Tudorache, Assoc. Professor, M.D.,
PhD**

Course Coordinator,

**Laboratory Coordinator,
Buză Iulia, Lecturer**

Department Approval Date

18.09.2025



DISCIPLINE FILE

Faculty	MEDICINE
Department	PRECLINICAL SCIENCES
Field of study	HEALTHCARE
Study cycle	BACHELOR
Study programme	MEDICINE IN ENGLISH

Discipline`s Name	MEDICAL MANOEUVRES SKILLS (1 ST MODULE)				
Didactic position, name and surname of the Discipline Coordinator	Mocanu Horia, Assoc.Prof., M.D., PhD				
Didactic position, name and surname for the Course Coordinator	Mocanu Horia, Assoc.Prof., M.D., PhD				
Didactic position, name and surname for the Coordinator of the Seminar / Laboratory / Clinical Traineeship	Kraft Alin Alexandru, Lecturer Țirlea Laura, PhD. Candidate Dermengiu Teodora, PhD. Candidate				
Discipline Code	MLE.2.4.15	Formative category of the discipline		SS	
Year of Study	II	Semester	4	Type of the final evaluation (E, V)	E4
Discipline Regime (M-mandatory, E-elective)			M	No. of credits	4

No. of Hours per week	4	Out of which are Course hours:	2	Seminar / Practical Activity / Clinical Stage	2
Total of hours in the curriculum	56	Out of which are Course hours:	2	Seminar / Practical Activity / Clinical Stage	28
		Total hours per semester	100	Total hours of individual study	44

Distribution of time pool per week	Hours
1. Study of the course material	2
2. Study according with the course support, manuals	15
3. Study of the minimal bibliography	2
4. Additional documentation in the library	2
5. Specific activity for the seminary or laboratory	2

Distribution of time pool per week	Hours
6. Homework, translations, etc.	0
7. Preparing for different written exams	1
8. Preparing for oral examinations	0
9. Preparing for the final examination	6
10. Consultations	2
11. In the field documentation	0
12. Documentation from web sources, portals, wiki websites	8
13. Tutoring	2
14. Examinations	2
15. Other activities:	0

Course name	MEDICAL MANOEUVRES SKILLS (1 ST MODULE)
Specific professional competencies	<ul style="list-style-type: none"> • Understanding the principles and methodology of clinical examination and patient assessment. • Identifying diagnostic procedures and paraclinical investigations used in the evaluation of major organ systems. • Interpreting clinical signs and laboratory or imaging data in the context of diagnostic reasoning. • Performing basic clinical examination techniques and diagnostic maneuvers under supervision. • Recognizing normal and pathological findings during clinical and paraclinical assessments.
Transversal competencies	<ul style="list-style-type: none"> • Development of analytical and critical thinking in the interpretation of clinical findings and diagnostic data. • Effective communication of clinical information during patient assessment and case presentation. • Collaboration within multidisciplinary healthcare teams during diagnostic and clinical evaluation. • Demonstration of professional responsibility, ethical conduct, and patient-centered behavior. • Use of scientific resources and clinical guidelines to support evidence-based medical practice.
General objectives of the discipline	<ul style="list-style-type: none"> • To develop fundamental knowledge and practical skills in clinical examination and diagnostic procedures. • To familiarize students with the methodology of patient assessment and interpretation of diagnostic investigations. • To promote the integration of clinical examination findings with laboratory and imaging data. • To establish the basis for clinical reasoning and diagnostic decision-making
Specific objectives of the discipline	<ul style="list-style-type: none"> • Identify and perform systematic clinical examination techniques for major organ systems. • Understand the principles and indications of diagnostic procedures and paraclinical investigations. • Interpret laboratory results and imaging findings in relation to clinical evaluation.

	<ul style="list-style-type: none"> • Recognize normal and pathological findings during clinical and instrumental examination. • Develop the ability to present clinical cases in a structured and coherent manner.
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Learning Outcomes	
Knowledge	Students identify the principles and stages of clinical examination and structured patient assessment, describe diagnostic methods and paraclinical investigations used in evaluating major organ systems, explain the clinical relevance of laboratory data, imaging techniques, and instrumental diagnostic procedures.
Skills	Students interpret clinical signs and paraclinical findings obtained during patient examination, analyze diagnostic data from laboratory tests, imaging studies, and functional investigations, perform basic clinical examination techniques and selected diagnostic procedures under supervision.
Responsibilities/ Autonomy	Students apply principles of clinical examination and diagnostic reasoning in simulated or supervised clinical contexts, professional and ethical standards when interacting with patients during clinical assessment, effective communication and teamwork skills when presenting and discussing clinical cases.

Course Syllabus	Hours
Course #1 – Clinical General Examination and Anamnesis Foundations of clinical assessment: conducting a thorough anamnesis and the structured presentation of a clinical case.	2
Course #2 – Interpretation of Laboratory Data Approach to reading and interpreting laboratory results. Emphasis on clinical relevance and integration into diagnostic reasoning.	2
Course #3 – Modern Imaging Diagnostic Methods Overview of imaging techniques (X-ray, CT, MRI, ultrasound). Basic principles, indications, and limitations in medical diagnostics.	2
Course #4 – Respiratory System Examination Complete clinical evaluation of the respiratory tract. Diagnostic investigations specific to respiratory function and pathology.	2
Course #5 – Ophthalmological Examination Clinical methods for assessing vision and ocular health. Key investigations used in ophthalmology and their diagnostic value.	2
Course #6 – ENT (Ear, Nose, Throat) Examination Examination techniques for ENT disorders. Relevant clinical signs and paraclinical investigations for rapid ENT evaluation.	2
Course #7 – Cardiological Examination Systematic assessment of cardiovascular function. Essential clinical and paraclinical investigations for cardiology diagnostics.	2
Course #8 – Peripheral Vascular Examination Evaluation of arterial, venous, and lymphatic systems. Diagnostic methods for identifying peripheral vascular pathologies.	2

Course Syllabus	Hours
Course #9 – Neurological Examination – Central Nervous System Assessment of central neurological function. Clinical signs and diagnostic tools for CNS disorders.	2
Course #10 – Neurological Examination – Peripheral Nervous System Techniques for evaluating the peripheral nervous system. Clinical signs and complementary investigations for diagnosis.	2
Course #11 – Abdominal Wall Examination Inspection and palpation techniques for abdominal wall assessment. Identification and diagnosis of parietal abdominal defects.	2
Course #12 – Examination of the Upper Digestive Tract Clinical and paraclinical evaluation of the digestive tract up to the duodeno-jejunal angle. Recognition of pathology in this segment.	2
Course #13 – Examination of the Distal Digestive Tract Assessment of the lower digestive tract beyond the duodeno-jejunal angle. Diagnostic steps for identifying lower GI pathology.	2
Course #14 – Liver and Pancreas Examination Focused examination and investigations of hepatic and pancreatic function. Recognition of signs and interpretation of diagnostic findings.	2

Laboratory Syllabus	Hours
Laboratory Work #1 – General Clinical Examination Techniques Hands-on training in the systematic examination of patients by body systems. Emphasis on inspection, palpation, percussion, and auscultation techniques.	2
Laboratory Work #2 – Spirometry – Technique and Interpretation Proper use of spirometry equipment. Analysis and interpretation of results to assess pulmonary function.	2
Laboratory Work #3 – Fundus Examination and Anterior Ocular Pole Execution of a proper eye fundus exam. Introduction to paraclinical investigation techniques for the anterior segment of the eye.	2
Laboratory Work #4 – Otoscopy and Auditory Testing Techniques for otoscopy and conducting hearing assessments. Interpretation of audiograms and use of tuning forks (diapason tests).	2
Laboratory Work #5 – Cardiac Examination and ECG Interpretation Comprehensive clinical examination of the heart. Performing and interpreting a standard electrocardiogram (EKG).	2
Laboratory Work #6 – Oscillometry and Cardiac Doppler Ultrasound Hands-on oscillometer technique. Interpretation of Doppler echocardiography for assessing cardiac blood flow.	2
Laboratory Work #7 – Doppler Ultrasound of Peripheral Vessels Execution of arterial and venous Doppler ultrasound for peripheral vascular assessment.	2
Laboratory Work #8 – Central Neurological Examination and Arterial Blood Gases (ABG) Neurological assessment focusing on the central nervous system. Performing and interpreting an arterial blood gas test (EGA).	2
Laboratory Work #9 – Peripheral Neurological Assessment and Electromyography Assessment of peripheral nerve function. Performing electromyography (EMG) and measuring nerve conduction velocity.	2

Laboratory Syllabus	Hours
Laboratory Work #10 – Transabdominal Ultrasound Technique for conducting an abdominal wall ultrasound. Identification of parietal abdominal defects.	2
Laboratory Work #11 – Barium Transit Study – Technique and Interpretation Procedure for performing a barium swallow (upper GI contrast study). Interpretation of findings in relation to digestive tract motility and structure.	2
Laboratory Work #12 – Upper Digestive Endoscopy Technique for performing an upper GI endoscopy. Recognizing and interpreting normal and pathological findings.	2
Laboratory Work #13 – Colonic Irrigation Procedure Step-by-step guide to performing a bowel irrigation. Clinical applications and interpretation of outcomes.	2
Laboratory Work #14 – Lower Digestive Endoscopy Execution and interpretation of lower GI endoscopic procedures. Identification of pathological features in the colon and rectum.	2

Minimum References:
1. Bickley LS. Bates' guide to physical examination and history taking . 13th ed. Philadelphia: Wolters Kluwer; 2020.
2. Talley NJ, O'Connor S. Clinical examination: a systematic guide to physical diagnosis . 8th ed. Chatswood (NSW): Elsevier; 2020.
3. Douglas G, Nicol F, Robertson C. Macleod's clinical examination . 15th ed. Edinburgh: Elsevier; 2020.
4. Ball JW, Dains JE, Flynn JA, Solomon BS, Stewart RW. Seidel's guide to physical examination . 9th ed. St. Louis: Elsevier; 2023.
5. Teaching support materials

Correlation of the contents of the discipline with the expectations of the representatives of the epistemic community, professional associations and representative employers in the health sector
•

How the information is transmitted	
Type of Activity	Teaching methods used
Lecture	<ul style="list-style-type: none"> Systematic and structured presentation of the fundamental principles underlying basic medical manoeuvres and clinical procedures, delivered through oral exposition and interactive question-and-answer discussions.
Laboratory (Practical Work)	<ul style="list-style-type: none"> Practical training focused on the acquisition and correct performance of basic medical manoeuvres and clinical skills through supervised demonstrations and hands-on practice, with emphasis on patient safety and professional conduct.

Minimal performance standards – the minimum level of activities that need to be fulfilled by the student during the practical works to be accepted to the final laboratory exam:
<ul style="list-style-type: none"> Attendance of at least 70% of all practical sessions, with mandatory completion of all missed activities, including absences recorded during mid-semester evaluations.

Minimal performance standards – the minimum level of activities that need to be fulfilled by the student during the practical works to be accepted to the final laboratory exam:

- Completion of thematic assignments to support the understanding of fundamental concepts corresponding to each practical session.
- Identification of basic anatomical structures using a variety of educational materials: skeletal models, osteological collections, anatomical specimens, topographic sections, preserved human cadavers, 3D anatomical casts, as well as classical iconography and medical imaging (X-ray, CT, MRI).
- Active and interactive participation during practical sessions, including responses to the instructor’s questions, involvement in discussions, and application of theoretical knowledge in practice.
- Use of the virtual dissection table to deepen the understanding of three-dimensional topographical relationships and to correlate findings with classical dissection and imaging techniques.
- Exploration and consolidation of taught concepts through projected digital anatomical atlases (e.g., Netter, Thieme) to enhance visual anatomical learning.

Minimum set of activities that must be performed by the student in the practical exam in order to be admitted to the exam (final verification): obtaining an average of 5 in the practical exams of anatomy and embryology

- Attainment of a minimum average grade of 5 (five) in all practical tests and evaluations conducted throughout the semester.
- Demonstrated ability to identify major anatomical structures using various educational tools: anatomical specimens, dissected cadaveric material, 3D anatomical models, and the virtual dissection table.

Specific conditions for carrying out the theoretical and practical activities of the discipline:

- Active participation of the student in lectures and practical sessions, including attendance at demonstrative activities using the virtual dissection table and projected anatomical atlases.
- Successful completion of colloquia and practical-applied examinations in anatomy and embryology, as mandatory stages in the validation of specific competencies.
- Continuous engagement in the learning process through individual study and teamwork, to ensure the assimilation of fundamental knowledge and the ability to establish anatomo-clinical correlations in an interdisciplinary context.

Consideration points for computing the final score:	Percentage share of scoring (Total = 100%)
- Responses to the final exam	60 %
- Responses to the laboratory examination	15 %
- Periodic checks with written exams	10 %
- Continuous testing through the semester	10 %
- Projects / Translations / Posters / Essays, etc.	-
- Other activities:	5 %

Description of the actual methods of examination – E

- The final examination consists of an oral presentation of three topics randomly selected by the student, one from each of the following categories:

<ul style="list-style-type: none"> • Topics from lecture content; • Topics from practical work. <ul style="list-style-type: none"> • All examination topics are published and communicated to students at the beginning of the semester, ensuring effective and transparent preparation. • The exam is conducted in groups of at least three students, in the presence of the course coordinator, the head of practical activities, and the teaching assistant who supervised the group during the semester. • Students are granted thinking time, and the assessment is carried out in a transparent and supportive environment, allowing for coherent and logical articulation of knowledge. • The choice of oral examination is justified by the nature of the medical profession, where verbal communication is essential, and by the need to assess the student's ability to establish anatomo-clinical correlations. 	
Minimal requirements for grade 5 (or how grade 5 is awarded)	Requirements for grade 10 (or how grade 10 is awarded)
<ul style="list-style-type: none"> • Attendance of at least 70% of practical sessions, with mandatory completion of all missed activities. • Completion of all three colloquia during the semester, with a minimum grade of 5 in at least two of them (colloquia may be retaken if failed). • Submission of practical session assignments and demonstration of knowledge of basic concepts. • Achievement of an average grade of 5 in the practical examinations in anatomy and embryology. • Provision of minimally correct answers to the three oral exam topics, demonstrating understanding of the fundamental requirements of the discipline. 	<ul style="list-style-type: none"> • Achievement of an average grade above 9 in all three colloquia during the semester. • An average above 9 in the practical anatomy and embryology examinations, including accurate anatomical identification and anatomo-clinical justification. • Delivery of coherent, complete, and clinically correlated answers to all three oral exam topics, demonstrating advanced competencies and the ability to synthesize and integrate anatomical knowledge.

Date of completion

15.09.2025

Discipline Coordinator,

Mocanu Horia, Assoc.Prof., M.D., PhD

Head of Department,

**Ioan Sorin Tudorache, Assoc. Professor, M.D.,
PhD**

Course Coordinator,

Mocanu Horia, Assoc.Prof., M.D., PhD

Laboratory Coordinator,

Kraft Alin Alexandru, Lecturer

Țirlea Laura, PhD. Candidate

Dermengiu Teodora, PhD. Candidate

Department Approval Date
18.09.2025



DISCIPLINE FILE

Faculty	MEDICINE
Department	PRECLINICAL SCIENCES
Field of study	HEALTHCARE
Study cycle	BACHELOR
Study programme	MEDICINE IN ENGLISH

Discipline`s Name	YEARLY MEDICAL PRACTICE FOR ACQUIRING MEDICAL SKILLS AND COMPETENCES				
Didactic position, name and surname of the Discipline Coordinator	-				
Didactic position, name and surname for the Course Coordinator	-				
Didactic position, name and surname for the Coordinator of the Seminar / Laboratory / Clinical Traineeship	Mitache Magdalena, Assoc. Professor Munteanu Ioana, Lecturer				
Discipline Code	MLE.2.4.16	Formative category of the discipline		SS	
Year of Study	II	Semester	4	Type of the final evaluation (E, V)	V4
Discipline Regime (M-mandatory, E-elective)			M	No. of credits	2

No. of Hours per week	40	Out of which are Course hours:	-	Seminar / Practical Activity / Clinical Stage	40
Total of hours in the curriculum	160	Out of which are Course hours:	-	Seminar / Practical Activity / Clinical Stage	160
		Total hours per semester	160	Total hours of individual study	-

Distribution of time pool per week				Hours
1. Study of the course material				0
2. Study according with the course support, manuals				0
3. Study of the minimal bibliography				0
4. Additional documentation in the library				0
5. Specific activity for the seminary or laboratory				0

Distribution of time pool per week	Hours
6. Homework, translations, etc.	0
7. Preparing for different written exams	0
8. Preparing for oral examinations	0
9. Preparing for the final examination	0
10. Consultations	0
11. In the field documentation	160
12. Documentation from web sources, portals, wiki websites	0
13. Tutoring	0
14. Examinations	0
15. Other activities:	0

Course name	YEARLY MEDICAL PRACTICE FOR ACQUIRING MEDICAL SKILLS AND COMPETENCES
Specific professional competencies	<ul style="list-style-type: none"> • Understanding the organization and workflow of healthcare institutions and patient management systems. • Applying aseptic and antiseptic techniques in clinical environments to ensure infection control and patient safety. • Performing accurate bedside assessments, including measurement of vital parameters and clinical documentation. • Conducting basic therapeutic and diagnostic procedures under supervision. • Demonstrating professional responsibility, empathy, and effective communication with patients and healthcare staff.
Transversal competencies	<ul style="list-style-type: none"> • Developing teamwork and interprofessional collaboration skills within the healthcare environment. • Demonstrating ethical and professional conduct in all patient interactions. • Adopting a patient-centered and safety-oriented attitude. • Applying self-reflection and continuous learning for skill improvement. • Integrating clinical knowledge with procedural practice and communication competence.
General objectives of the discipline	<ul style="list-style-type: none"> • To familiarize students with the hospital environment, patient circuit, and medical team dynamics. • To cultivate basic practical and communication skills required for clinical training. • To promote professionalism, empathy, and responsibility in the context of patient care.
Specific objectives of the discipline	<ul style="list-style-type: none"> • Understand the organization and administrative structure of a hospital. • Apply principles of asepsis and antisepsis in all clinical activities. • Perform routine bedside monitoring of vital signs and record findings accurately. • Execute basic medical maneuvers (e.g., blood pressure, blood glucose, oxygen administration). • Demonstrate appropriate professional behavior, patient communication, and adherence to ethical and legal norms.

Learning Outcomes	
Knowledge	Students identify the organization and workflow of healthcare institutions and the basic principles of patient management, describe the principles of asepsis, antisepsis, and infection control in clinical practice, explain the procedures used for bedside assessment, vital sign monitoring, and basic patient care.
Skills	Students interpret clinical information obtained during patient observation and bedside monitoring, perform basic clinical procedures under supervision, including measurement of vital signs and simple therapeutic maneuvers, analyze patient data and clinical findings to support basic clinical documentation and communication with healthcare teams.
Responsibilities/ Autonomy	Students apply principles of patient safety, asepsis, and infection control in clinical practice environments, professional and ethical standards when interacting with patients and healthcare personnel, effective communication and teamwork skills within the multidisciplinary healthcare team.

Laboratory Syllabus	Hours
Laboratory Work #1. Medical Language and Patient Handling Development of correct and logical use of medical language in clinical settings. Practical training in assisting patients with mobility, positioning at the edge of the bed, proper in-bed positioning, and recognition of normal vs. antalgic (pain-relieving) postures.	40
Laboratory Work #2. Administrative Knowledge Understanding the patient's circuit within the healthcare unit. Overview of patient rights and obligations, procedures for obtaining informed consent, and basic notions of medical malpractice.	40
Laboratory Work #3. Patient Management Approach to patient care based on specific pathologies. Application of general and condition-specific paraclinical investigations. Execution of dressing techniques, patient surveys, and basic principles of diet and nutrition planning.	40
Laboratory Work #4. Supervision and Execution of Medical Maneuvers Monitoring of key patient parameters: temperature, pulse, respiration, diuresis, stool, vomiting, sputum. Conducting structured anamnesis and pain assessment. Performance of non-invasive procedures such as blood pressure measurement, capillary glucose and pulse checks, oxygen therapy via nasal cannula, and administration of medications. Integration of knowledge through clinical case discussions.	40

Minimum References:
1. Bickley LS, Szilagyi PG, Hoffman RM. Bates' Guide to Physical Examination and History Taking. 13th ed. Philadelphia: Wolters Kluwer; 2021.
2. Dutton RP, Jones DG, Laupland KB, editors. Clinical Skills for Medical Students: A Step-by-Step Guide. 3rd ed. London: Elsevier; 2023.
3. Gaba DM. Patient Safety and Simulation in Clinical Practice. 2nd ed. New York: Springer Nature; 2022.
4. O'Neill PA, Dornan T, Dennick R. Clinical Skills in Medicine: Learning, Teaching and Assessment. 2nd ed. Oxford: Oxford University Press; 2021.

Minimum References:

5. World Health Organization. WHO Guidelines on Hand Hygiene in Health Care: First Global Patient Safety Challenge – Clean Care Is Safer Care. Geneva: World Health Organization; 2023.
6. Teaching support materials

Correlation of the contents of the discipline with the expectations of the representatives of the epistemic community, professional associations and representative employers in the health sector

- The content of the Yearly Medical Practice for Acquiring Medical Skills and Competences discipline corresponds to the expectations of the academic medical community and healthcare employers by developing fundamental clinical and professional skills essential for future medical practice. It provides first-year medical students with direct exposure to hospital organization, patient care, asepsis, vital sign monitoring, and basic medical maneuvers, forming the basis for clinical reasoning and patient safety. The course is aligned with the requirements of the WFME, AMEE, and national health authorities, fostering professional conduct, empathy, and procedural competence consistent with international medical training standards.

How the information is transmitted

Type of Activity	Teaching methods used
Lecture	<ul style="list-style-type: none"> •
Laboratory (Practical Work)	<ul style="list-style-type: none"> • Practical activities carried out in clinical settings, involving observation and participation in medical practice under supervision, with emphasis on the development of basic clinical skills and professional behavior.

Minimal performance standards – the minimum level of activities that need to be fulfilled by the student during the practical works to be accepted to the final laboratory exam:

-

Minimum set of activities that must be performed by the student in the practical exam in order to be admitted to the exam (final verification): obtaining an average of 5 in the practical exams:

-

Specific conditions for carrying out the theoretical and practical activities of the discipline:

-

Consideration points for computing the final score:	Percentage share of scoring (Total = 100%)
- Responses to the final exam	60 %
- Responses to the laboratory examination	15 %
- Periodic checks with written exams	10 %
- Continuous testing through the semester	10 %
- Projects / Translations / Posters / Essays, etc.	-
- Other activities:	5 %

Description of the actual methods of examination – E

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Minimal requirements for grade 5 (or how grade 5 is awarded)	Requirements for grade 10 (or how grade 10 is awarded)
•	•

Date of completion

16.09.2025

Discipline Coordinator,

**Head of Department,
Ioan Sorin Tudorache, Assoc. Professor, M.D.,
PhD**

Course Coordinator,

**Laboratory Coordinator,
Mitache Magdalena, Assoc. Professor
Munteanu Ioana, Lecturer**

Department Approval Date

18.09.2025



DISCIPLINE FILE

Faculty	MEDICINE
Department	PRECLINICAL SCIENCES
Field of study	HEALTHCARE
Study cycle	BACHELOR
Study programme	MEDICINE IN ENGLISH

Discipline`s Name	PHYSICAL EDUCATION				
Didactic position, name and surname of the Discipline Coordinator	-				
Didactic position, name and surname for the Course Coordinator	-				
Didactic position, name and surname for the Coordinator of the Seminar / Laboratory / Clinical Traineeship	Urichianu Bogdan, Assist. Professor				
Discipline Code	MLE.2.4.20	Formative category of the discipline		CS	
Year of Study	II	Semester	4	Type of the final evaluation (E, V)	C4
Discipline Regime (M -mandatory, E -elective)			M	No. of credits	1

No. of Hours per week	1	Out of which are Course hours:	-	Seminar / Practical Activity / Clinical Stage	1
Total of hours in the curriculum	14	Out of which are Course hours:	-	Seminar / Practical Activity / Clinical Stage	14
		Total hours per semester	25	Total hours of individual study	11

Distribution of time pool per week	Hours
1. Study of the course material	0
2. Study according with the course support, manuals	2
3. Study of the minimal bibliography	0
4. Additional documentation in the library	0
5. Specific activity for the seminary or laboratory	1

Distribution of time pool per week	Hours
6. Homework, translations, etc.	0
7. Preparing for different written exams	0
8. Preparing for oral examinations	0
9. Preparing for the final examination	1
10. Consultations	0
11. In the field documentation	0
12. Documentation from web sources, portals, wiki websites	1
13. Tutoring	2
14. Examinations	2
15. Other activities:	0

Course name	PHYSICAL EDUCATION
Specific professional competencies	<ul style="list-style-type: none"> Understanding the principles of physical activity and their role in maintaining health and physical fitness. Identifying fundamental motor skills and physical conditioning exercises used in general physical training. Developing endurance, strength, coordination, and flexibility through structured physical activities. Recognizing the importance of regular physical activity in the prevention of lifestyle-related diseases. Applying appropriate techniques and safety rules during physical training and sports activities.
Transversal competencies	<ul style="list-style-type: none"> Development of teamwork and cooperation during group physical activities and sports exercises. Enhancement of communication and interpersonal interaction in collective training environments. Promotion of responsible behavior, discipline, and respect for rules in sports practice. Encouragement of a healthy lifestyle and personal wellbeing through regular physical activity. Development of self-assessment and self-improvement abilities related to physical performance.
General objectives of the discipline	<ul style="list-style-type: none"> To promote physical activity and healthy lifestyle habits among medical students. To develop general physical fitness, motor coordination, and endurance. To encourage active participation in sports and recreational physical activities. To foster awareness of the role of physical exercise in maintaining physical and mental health.
Specific objectives of the discipline	<ul style="list-style-type: none"> Develop basic motor skills and improve physical conditioning through structured training exercises. Improve endurance, speed, strength, and flexibility through progressive physical activities. Learn and apply the fundamental rules and techniques of selected sports activities.

	<ul style="list-style-type: none"> • Encourage teamwork and cooperation in physical exercise contexts. • Promote self-discipline, safety awareness, and respect for physical training guidelines.
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Learning Outcomes	
Knowledge	Students identify the principles of physical activity and their role in maintaining health and physical fitness, describe fundamental motor skills and basic physical training methods used to improve endurance, strength, and coordination, explain the importance of regular physical activity in disease prevention and overall wellbeing.
Skills	Students interpret and perform basic physical exercises aimed at developing endurance, speed, strength, and flexibility, demonstrate motor coordination and sports-related skills during structured physical training activities, evaluate their physical performance and progress using basic physical fitness indicators.
Responsibilities/ Autonomy	Students apply principles of safe and effective physical training during sports and exercise activities, teamwork and cooperation skills in group physical training sessions, use healthy lifestyle habits and regular physical activity practices in daily life.

Laboratory Syllabus	Hours
Laboratory Work #1 – Communication of Guidelines and Rules Organizing students into groups; light running alternated with mobility exercises.	2
Laboratory Work #2 – General Physical Training Circuit Use of equipment (fixed ladders, medicine balls, gymnastics benches, basic acrobatics); endurance run – Boys: 5 minutes Girls: 4 minutes.	2
Laboratory Work #3 – General Physical Training Circuit (Partner Exercises) Free and medicine ball exercises in pairs, acrobatics; endurance run – Boys: 6 minutes Girls: 5 minutes.	2
Laboratory Work #4 – Outdoor General Physical Training Circuit Stadium stairs, rope exercises, motor skill games; endurance run – Boys: 7 minutes Girls: 6 minutes.	2
Laboratory Work #5 – Development of Motor Skills – Speed and Endurance Running drills, jumping and throwing exercises; long-distance running (8–10 minutes), sprinting (up to 50 meters), standing long jump.	2
Laboratory Work #6 – Sports-Specific Skills Development Technical and tactical exercises in sports games; table tennis – bilateral play; targeted musculoskeletal and general physical development exercises (flexibility, joint and muscle mobility).	2
Laboratory Work #7 – Assessment and Evaluation Control tests and standards.	2

Minimum References:
1. Beach PS, Perreault M, Brian A, Collier DH. Motor Learning and Development, 3rd ed. Champaign (IL): Human Kinetics; 2024.

Minimum References:

2. Colvin AV, Egner NJ, Walker PJ. Teaching Fundamental Motor Skills, 4th ed. Champaign (IL): Human Kinetics; 2023.
3. Spittle M. Motor Learning and Skill Acquisition: Applications for Physical Education and Sport. London: Bloomsbury Academic; 2021.
4. Zaccagni L (ed). Physical Activity, Wellness and Health: Challenges, Benefits and Strategies. Basel: MDPI Books; 2021.
5. Colvin A Vonnie, Egner N J, Walker P J. Teaching Fundamental Motor Skills, 4th ed. (eBook with HKPropel). Champaign (IL): Human Kinetics; 2023. (Same as #2, acknowledging digital edition)
6. Teaching support materials

Correlation of the contents of the discipline with the expectations of the representatives of the epistemic community, professional associations and representative employers in the health sector

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How the information is transmitted

Type of Activity	Teaching methods used
Lecture	•
Laboratory (Practical Work)	<ul style="list-style-type: none"> • Practical activities aimed at developing physical fitness, coordination, and endurance through structured physical exercises, with emphasis on the promotion of a healthy lifestyle and regular physical activity.

Minimal performance standards – the minimum level of activities that need to be fulfilled by the student during the practical works to be accepted to the final laboratory exam:

- Attendance of at least 70% of all practical sessions, with mandatory completion of all missed activities, including absences recorded during mid-semester evaluations.
- Completion of thematic assignments to support the understanding of fundamental concepts corresponding to each practical session.
- Identification of basic anatomical structures using a variety of educational materials: skeletal models, osteological collections, anatomical specimens, topographic sections, preserved human cadavers, 3D anatomical casts, as well as classical iconography and medical imaging (X-ray, CT, MRI).
- Active and interactive participation during practical sessions, including responses to the instructor's questions, involvement in discussions, and application of theoretical knowledge in practice.
- Use of the virtual dissection table to deepen the understanding of three-dimensional topographical relationships and to correlate findings with classical dissection and imaging techniques.
- Exploration and consolidation of taught concepts through projected digital anatomical atlases (e.g., Netter, Thieme) to enhance visual anatomical learning.

Minimum set of activities that must be performed by the student in the practical exam in order to be admitted to the exam (final verification): obtaining an average of 5 in the practical exams of anatomy and embryology

- Attainment of a minimum average grade of 5 (five) in all practical tests and evaluations conducted throughout the semester.

- Demonstrated ability to identify major anatomical structures using various educational tools: anatomical specimens, dissected cadaveric material, 3D anatomical models, and the virtual dissection table.

Specific conditions for carrying out the theoretical and practical activities of the discipline:

- Active participation of the student in lectures and practical sessions, including attendance at demonstrative activities using the virtual dissection table and projected anatomical atlases.
- Successful completion of colloquia and practical-applied examinations in anatomy and embryology, as mandatory stages in the validation of specific competencies.
- Continuous engagement in the learning process through individual study and teamwork, to ensure the assimilation of fundamental knowledge and the ability to establish anatomo-clinical correlations in an interdisciplinary context.

Consideration points for computing the final score:	Percentage share of scoring (Total = 100%)
- Responses to the final exam	60 %
- Responses to the laboratory examination	15 %
- Periodic checks with written exams	10 %
- Continuous testing through the semester	10 %
- Projects / Translations / Posters / Essays, etc.	-
- Other activities:	5 %

Description of the actual methods of examination – E

- The final examination consists of an oral presentation of three topics randomly selected by the student, one from each of the following categories:
 - Topics from lecture content;
 - Topics from practical work.
- All examination topics are published and communicated to students at the beginning of the semester, ensuring effective and transparent preparation.
- The exam is conducted in groups of at least three students, in the presence of the course coordinator, the head of practical activities, and the teaching assistant who supervised the group during the semester.
- Students are granted thinking time, and the assessment is carried out in a transparent and supportive environment, allowing for coherent and logical articulation of knowledge.
- The choice of oral examination is justified by the nature of the medical profession, where verbal communication is essential, and by the need to assess the student's ability to establish anatomo-clinical correlations.

Minimal requirements for grade 5 (or how grade 5 is awarded)	Requirements for grade 10 (or how grade 10 is awarded)
<ul style="list-style-type: none"> • Attendance of at least 70% of practical sessions, with mandatory completion of all missed activities. • Completion of all three colloquia during the semester, with a minimum grade of 5 in at least two of them (colloquia may be retaken if failed). 	<ul style="list-style-type: none"> • Achievement of an average grade above 9 in all three colloquia during the semester. • An average above 9 in the practical anatomy and embryology examinations, including accurate anatomical identification and anatomo-clinical justification. • Delivery of coherent, complete, and clinically correlated answers to all three oral exam

<ul style="list-style-type: none"> • Submission of practical session assignments and demonstration of knowledge of basic concepts. • Achievement of an average grade of 5 in the practical examinations in anatomy and embryology. • Provision of minimally correct answers to the three oral exam topics, demonstrating understanding of the fundamental requirements of the discipline. 	<p>topics, demonstrating advanced competencies and the ability to synthesize and integrate anatomical knowledge.</p>
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Date of completion

16.09.2025

Discipline Coordinator,

Head of Department,

**Ioan Sorin Tudorache, Assoc. Professor, M.D.,
PhD**

Course Coordinator,

**Laboratory Coordinator,
Urichianu Bogdan, Assist. Professor**

Department Approval Date

18.09.2025



DISCIPLINE FILE

Faculty	MEDICINE
Department	PRECLINICAL SCIENCES
Field of study	HEALTHCARE
Study cycle	BACHELOR
Study programme	MEDICINE IN ENGLISH

Discipline`s Name	SLEEP PHYSIOLOGY				
Didactic position, name and surname of the Discipline Coordinator	Munteanu Ioana, Lecturer				
Didactic position, name and surname for the Course Coordinator	Munteanu Ioana, Lecturer				
Didactic position, name and surname for the Coordinator of the Seminar / Laboratory / Clinical Traineeship					
Discipline Code	MLE.O.5	Formative category of the discipline		DS	
Year of Study	II	Semester	3	Type of the final evaluation (E, V)	V3
Discipline Regime (M -mandatory, E -elective)			E	No. of credits	1

No. of Hours per week	2	Out of which are Course hours:	1	Seminar / Practical Activity / Clinical Stage	1
Total of hours in the curriculum	28	Out of which are Course hours:	14	Seminar / Practical Activity / Clinical Stage	14
		Total hours per semester	50	Total hours of individual study	22

Distribution of time pool per week					Hours
1. Study of the course material					1
2. Study according with the course support, manuals					7
3. Study of the minimal bibliography					1
4. Additional documentation in the library					1
5. Specific activity for the seminary or laboratory					1
6. Homework, translations, etc.					0

Distribution of time pool per week	Hours
7. Preparing for different written exams	1
8. Preparing for oral examinations	0
9. Preparing for the final examination	3
10. Consultations	1
11. In the field documentation	0
12. Documentation from web sources, portals, wiki websites	3
13. Tutoring	2
14. Examinations	2
15. Other activities:	0

Course name	SLEEP PHYSIOLOGY
Specific professional competencies	<ul style="list-style-type: none"> • Understanding the physiological mechanisms regulating sleep and the sleep–wake cycle. • Identifying the neurobiological and circadian mechanisms involved in sleep regulation. • Interpreting normal sleep architecture and its variations across the human lifespan. • Recognizing the physiological basis and clinical relevance of major sleep disorders. • Interpreting diagnostic tools used in sleep medicine, including sleep questionnaires, respiratory polygraphy, and polysomnography.
Transversal competencies	<ul style="list-style-type: none"> • Development of analytical and critical thinking in the evaluation of sleep-related physiological processes and disorders. • Effective communication of scientific information related to sleep physiology and sleep hygiene. • Ability to collaborate in multidisciplinary teams addressing sleep-related health problems. • Demonstration of ethical and professional responsibility in the evaluation of patient health and wellbeing. • Use of scientific and digital resources to support evidence-based medical learning.
General objectives of the discipline	<ul style="list-style-type: none"> • To provide fundamental knowledge regarding the physiology and regulation of sleep. • To develop the ability to understand the biological, neurological, and circadian mechanisms of sleep. • To familiarize students with the clinical significance of sleep disorders and their impact on health. • To promote the integration of sleep physiology concepts into clinical and preventive medical practice.
Specific objectives of the discipline	<ul style="list-style-type: none"> • Identify the physiological mechanisms regulating sleep and circadian rhythms. • Explain sleep architecture and developmental variations across the lifespan. • Analyze the functions of sleep and the health consequences of sleep disturbances.

	<ul style="list-style-type: none"> • Understand the principles and methods used in sleep assessment and diagnosis. • Recognize common sleep disorders and evidence-based approaches for improving sleep quality.
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Learning Outcomes	
Knowledge	Students identify the physiological mechanisms regulating sleep and the sleep–wake cycle, describe the neurobiological, circadian, and developmental factors influencing sleep architecture and sleep patterns, explain the physiological basis of common sleep disorders and the principles of sleep assessment methods.
Skills	Students interpret sleep physiology concepts in relation to normal biological functions and clinical conditions, analyze sleep-related data obtained from sleep questionnaires, sleep diaries, and polysomnography reports, evaluate sleep patterns and risk factors associated with sleep disorders in clinical and research contexts.
Responsibilities/ Autonomy	Students apply knowledge of sleep physiology in the interpretation of health problems associated with sleep disturbances, apply principles of sleep hygiene and preventive strategies in clinical and community health contexts, apply ethical and professional principles when discussing sleep-related health recommendations and patient wellbeing.

Course Syllabus	Hours
Course #1 – Introduction to Sleep Physiology: Sleep as a Fundamental Biological Need Overview of sleep as an essential homeostatic process. Discusses sleep architecture, basic neurophysiology, and the consequences of sleep deprivation on systemic health.	2
Course #2 – Circadian Rhythm, Sleep–Wake Cycle, and the Neurobiology of Sleep Examines circadian regulation mechanisms, roles of the suprachiasmatic nucleus, melatonin, and neurotransmitter systems involved in sleep initiation and maintenance.	2
Course #3 – Sleep Across the Lifespan: Neonatal, Pediatric, Adolescent, and Adult Sleep Patterns; The Role of Napping Analyzes age-specific characteristics of sleep, developmental changes, and clinical implications. Includes physiological and cultural aspects of daytime napping (siesta).	2
Course #4 – Functions of Sleep and the Health Impact of Sleep Disorders Explores restorative, cognitive, metabolic, and immunological roles of sleep. Reviews how disturbances contribute to chronic disease, mental health conditions, and accidents.	2
Course #5 – Methods for Studying Sleep: Questionnaires, Polygraphy, Polysomnography, and Sleep Medicine Services Introduces subjective and objective sleep assessment tools. Covers validated sleep questionnaires, respiratory polygraphy, full polysomnography, and the structure of clinical sleep laboratories.	2
Course #6 – Respiratory Physiology During Sleep and Obstructive Sleep Apnea Syndrome Discusses normal respiratory changes during sleep and the pathophysiology, diagnosis, and management principles of obstructive sleep apnea and related sleep-disordered breathing.	2
Course #7 – Insomnia, Parasomnias, Circadian Rhythm Disorders, and Evidence-Based Sleep Hygiene	2

Course Syllabus	Hours
Covers classification, clinical features, and diagnostic criteria of common sleep disorders. Provides practical, evidence-based recommendations for improving sleep quality and circadian alignment.	

Laboratory Syllabus	Hours
Laboratory Work #1 – Sleep Diary and Circadian Pattern Analysis Students complete and analyze a 7-day sleep diary (or provided case data), interpret sleep-wake patterns, and identify circadian misalignment or sleep hygiene deficits.	2
Laboratory Work #2 – Screening Tools in Sleep Medicine: Questionnaire Interpretation Hands-on use of validated questionnaires (Epworth Sleepiness Scale, STOP-Bang, Insomnia Severity Index). Students practice scoring, interpretation, and clinical decision-making based on results.	2
Laboratory Work #3 – Introduction to PSG and Respiratory Polygraphy Data Students examine anonymized polygraphy and polysomnography reports. Activities include identifying sleep stages, scoring respiratory events, and recognizing patterns consistent with OSAS or PLMD.	2
Laboratory Work #4 – Pediatric vs. Adult Sleep Case Discussions Case-based small group work comparing clinical presentations in infants, children, adolescents, and adults. Focus on developmental sleep needs and age-dependent disorders.	2
Laboratory Work #5 – Clinical Evaluation of Insomnia and Parasomnias Role-play and structured interview practice using clinical vignettes. Students learn to differentiate insomnia subtypes, screen for parasomnias, and formulate management strategies.	2
Laboratory Work #6 – Recognition of Sleep-Related Breathing Disorders Interpretation of simplified overnight monitoring data (oximetry trends, airflow tracings). Students classify severity of obstructive sleep apnea and discuss treatment options.	2
Laboratory Work #7 – Designing an Evidence-Based Sleep Hygiene Intervention Students develop personalized sleep hygiene plans based on case scenarios, integrating behavioral, environmental, and circadian-based recommendations.	2

Minimum References:
1. Kryger MH, Roth T, Dement WC, editors. Principles and practice of sleep medicine . 7th ed. Philadelphia: Elsevier; 2022.
2. Brown RE, Basheer R, McKenna JT, Strecker RE, McCarley RW. Control of sleep and wakefulness . 2nd ed. Oxford: Oxford University Press; 2012.
3. Chokroverty S. Sleep disorders medicine: basic science, technical considerations, and clinical aspects . 4th ed. New York: Springer; 2017.
4. Carskadon MA, editor. Normal human sleep: an overview . New York: Springer; 2019.
5. Teaching support materials

Correlation of the contents of the discipline with the expectations of the representatives of the epistemic community, professional associations and representative employers in the health sector
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How the information is transmitted	
Type of Activity	Teaching methods used

How the information is transmitted	
Lecture	<ul style="list-style-type: none"> • Systematic and structured presentation of the physiological mechanisms regulating sleep and wakefulness, focusing on the neurobiological processes and functional regulation of sleep, delivered through oral exposition and interactive question-and-answer discussions.
Laboratory (Practical Work)	<ul style="list-style-type: none"> •

Minimal performance standards – the minimum level of activities that need to be fulfilled by the student during the practical works to be accepted to the final laboratory exam:
<ul style="list-style-type: none"> • Attendance of at least 70% of all practical sessions, with mandatory completion of all missed activities, including absences recorded during mid-semester evaluations. • Completion of thematic assignments to support the understanding of fundamental concepts corresponding to each practical session. • Identification of basic anatomical structures using a variety of educational materials: skeletal models, osteological collections, anatomical specimens, topographic sections, preserved human cadavers, 3D anatomical casts, as well as classical iconography and medical imaging (X-ray, CT, MRI). • Active and interactive participation during practical sessions, including responses to the instructor’s questions, involvement in discussions, and application of theoretical knowledge in practice. • Use of the virtual dissection table to deepen the understanding of three-dimensional topographical relationships and to correlate findings with classical dissection and imaging techniques. • Exploration and consolidation of taught concepts through projected digital anatomical atlases (e.g., Netter, Thieme) to enhance visual anatomical learning.

Minimum set of activities that must be performed by the student in the practical exam in order to be admitted to the exam (final verification): obtaining an average of 5 in the practical exams of anatomy and embryology
<ul style="list-style-type: none"> • Attainment of a minimum average grade of 5 (five) in all practical tests and evaluations conducted throughout the semester. • Demonstrated ability to identify major anatomical structures using various educational tools: anatomical specimens, dissected cadaveric material, 3D anatomical models, and the virtual dissection table.

Specific conditions for carrying out the theoretical and practical activities of the discipline:
<ul style="list-style-type: none"> • Active participation of the student in lectures and practical sessions, including attendance at demonstrative activities using the virtual dissection table and projected anatomical atlases. • Successful completion of colloquia and practical-applied examinations in anatomy and embryology, as mandatory stages in the validation of specific competencies. • Continuous engagement in the learning process through individual study and teamwork, to ensure the assimilation of fundamental knowledge and the ability to establish anatomo-clinical correlations in an interdisciplinary context.

Consideration points for computing the final score:	Percentage share of scoring (Total = 100%)
- Responses to the final exam	60 %

- Responses to the laboratory examination	15 %
- Periodic checks with written exams	10 %
- Continuous testing through the semester	10 %
- Projects / Translations / Posters / Essays, etc.	-
- Other activities:	5 %

Description of the actual methods of examination – E

- The final examination consists of an oral presentation of three topics randomly selected by the student, one from each of the following categories:
 - Topics from lecture content;
 - Topics from practical work.
- All examination topics are published and communicated to students at the beginning of the semester, ensuring effective and transparent preparation.
- The exam is conducted in groups of at least three students, in the presence of the course coordinator, the head of practical activities, and the teaching assistant who supervised the group during the semester.
- Students are granted thinking time, and the assessment is carried out in a transparent and supportive environment, allowing for coherent and logical articulation of knowledge.
- The choice of oral examination is justified by the nature of the medical profession, where verbal communication is essential, and by the need to assess the student's ability to establish anatomo-clinical correlations.

Minimal requirements for grade 5 (or how grade 5 is awarded)	Requirements for grade 10 (or how grade 10 is awarded)
<ul style="list-style-type: none"> • Attendance of at least 70% of practical sessions, with mandatory completion of all missed activities. • Completion of all three colloquia during the semester, with a minimum grade of 5 in at least two of them (colloquia may be retaken if failed). • Submission of practical session assignments and demonstration of knowledge of basic concepts. • Achievement of an average grade of 5 in the practical examinations in anatomy and embryology. • Provision of minimally correct answers to the three oral exam topics, demonstrating understanding of the fundamental requirements of the discipline. 	<ul style="list-style-type: none"> • Achievement of an average grade above 9 in all three colloquia during the semester. • An average above 9 in the practical anatomy and embryology examinations, including accurate anatomical identification and anatomo-clinical justification. • Delivery of coherent, complete, and clinically correlated answers to all three oral exam topics, demonstrating advanced competencies and the ability to synthesize and integrate anatomical knowledge.

Date of completion

16.09.2025

**Discipline Coordinator,
Munteanu Ioana, Lecturer**

Head of Department,

**Ioan Sorin Tudorache, Assoc. Professor, M.D.,
PhD**

**Course Coordinator,
Munteanu Ioana, Lecturer**

Laboratory Coordinator,

**Department Approval Date
18.09.2025**



DISCIPLINE FILE

Faculty	MEDICINE
Department	PRECLINICAL SCIENCES
Field of study	HEALTHCARE
Study cycle	BACHELOR
Study programme	MEDICINE IN ENGLISH

Discipline`s Name	HEALTH PROMOTION				
Didactic position, name and surname of the Discipline Coordinator	Rusu Elena, Assoc. Professor, PhD				
Didactic position, name and surname for the Course Coordinator	Rusu Elena, Assoc. Professor, PhD				
Didactic position, name and surname for the Coordinator of the Seminar / Laboratory / Clinical Traineeship	-				
Discipline Code	MLE.0.6	Formative category of the discipline		DS	
Year of Study	II	Semester	3	Type of the final evaluation (E, V)	V3
Discipline Regime (M -mandatory, E -elective)				E	No. of credits
					1

No. of Hours per week	2	Out of which are Course hours:	1	Seminar / Practical Activity / Clinical Stage	1
Total of hours in the curriculum	28	Out of which are Course hours:	14	Seminar / Practical Activity / Clinical Stage	14
		Total hours per semester	50	Total hours of individual study	22

Distribution of time pool per week	Hours
1. Study of the course material	1
2. Study according with the course support, manuals	7
3. Study of the minimal bibliography	1
4. Additional documentation in the library	1
5. Specific activity for the seminary or laboratory	1

Distribution of time pool per week	Hours
6. Homework, translations, etc.	0
7. Preparing for different written exams	1
8. Preparing for oral examinations	0
9. Preparing for the final examination	3
10. Consultations	1
11. In the field documentation	0
12. Documentation from web sources, portals, wiki websites	3
13. Tutoring	2
14. Examinations	2
15. Other activities:	0

Course name	HEALTH PROMOTION
Specific professional competencies	<ul style="list-style-type: none"> • Understanding the conceptual foundations and principles of health promotion in clinical and public health contexts. • Identifying determinants of health and major risk factors influencing population health status. • Interpreting health promotion strategies, policies, and interventions within biomedical, behavioral, and socio-environmental frameworks. • Applying principles of prevention, risk assessment, and health education in clinical and community settings. • Recognizing the role of public health policies and international frameworks in promoting population health.
Transversal competencies	<ul style="list-style-type: none"> • Development of analytical and critical thinking in evaluating health promotion strategies and public health policies. • Effective communication of health-related information and preventive recommendations to diverse populations. • Ability to collaborate in multidisciplinary teams addressing health promotion initiatives. • Demonstration of ethical responsibility and professional conduct in community and public health activities. • Use of scientific and informational resources to support evidence-based health promotion interventions.
General objectives of the discipline	<ul style="list-style-type: none"> • To provide fundamental knowledge regarding the principles and strategies of health promotion. • To develop the ability to understand the determinants of health and their impact on population health outcomes. • To familiarize students with prevention strategies and health promotion policies at national and international levels. • To promote the integration of health promotion principles into clinical and community healthcare practice.
Specific objectives of the discipline	<ul style="list-style-type: none"> • Identify major concepts, models, and historical developments in health promotion. • Explain the biomedical, behavioral, and socio-environmental approaches to health promotion. • Analyze determinants of health and major risk factors influencing population health.

	<ul style="list-style-type: none"> • Understand the role of public health policies and global health promotion frameworks. • Develop the ability to design and evaluate basic health promotion interventions.
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Learning Outcomes	
Knowledge	Students identify the fundamental concepts, models, and principles of health promotion, describe the determinants of health and the main biomedical, behavioral, and socio-environmental approaches to disease prevention and health promotion, explain the role of public health policies, international declarations, and prevention strategies in improving population health.
Skills	Students interpret health promotion frameworks and public health strategies in clinical and community contexts, analyze health determinants and risk factors using epidemiological and preventive perspectives, evaluate health promotion interventions and prevention programs using basic public health concepts.
Responsibilities/ Autonomy	Students apply health promotion principles in the interpretation of population health challenges, preventive strategies and risk factor management concepts in clinical and community health scenarios, ethical and professional principles when participating in health education and public health initiatives.

Course Syllabus	Hours
Course #1 – Foundations of Health Promotion: Historical Evolution and the Ottawa Charter Explores the historical development of health promotion, with emphasis on the 1986 Ottawa Charter. Reviews its five core action areas and underlying principles as a global framework for public health initiatives.	2
Course #2 – Global Health Promotion Milestones and Definitions Analyzes key international conferences and declarations, including the Shanghai Declaration. Defines health from medical and public health perspectives and examines the essential components of effective health promotion strategies.	2
Course #3 – Biomedical Approach to Health Promotion Examines the biomedical model's emphasis on disease prevention, screening, and medical interventions. Discusses the role of clinical practice and epidemiological surveillance in health promotion.	2
Course #4 – Lifestyle and Behavioral Approaches in Health Promotion Focuses on individual responsibility and behavioral modification. Analyzes interventions targeting habits such as smoking, diet, physical activity, and substance use within the clinical and community context.	2
Course #5 – Socio-Environmental Perspectives and Determinants of Health Presents health as a product of social, economic, and environmental conditions. Discusses structural determinants and the need for intersectoral collaboration in promoting health equity.	2
Course #6 – Identification and Management of Risk Factors Addresses the classification and clinical relevance of modifiable and non-modifiable risk	2

Course Syllabus	Hours
factors. Emphasizes early detection and intervention strategies to reduce the burden of chronic and communicable diseases.	
Course #7 – Public Health Policy and Governmental Roles in Health Promotion Explores national and international health policies that shape population health. Reviews legislative, regulatory, and institutional mechanisms that support health promotion at systemic levels.	2

Laboratory Syllabus	Hours
Laboratory Work #1 – Applying the Ottawa Charter to Health Promotion Practice Students analyze real public health campaigns and map their components to the five action areas of the Ottawa Charter, developing practical understanding of foundational principles.	2
Laboratory Work #2 – Global Health Promotion Declarations: Timeline and Policy Application Students create a timeline of major WHO conferences and apply global definitions and declarations to contemporary health promotion challenges.	2
Laboratory Work #3 – Biomedical Prevention and Screening Exercises Hands-on simulations using mock clinical data to practice risk screening, interpret epidemiological trends, and differentiate levels of prevention.	2
Laboratory Work #4 – Behavioral Change Techniques and Counseling Practice Role-play and brief-intervention design focused on smoking cessation, diet, physical activity, and substance use, integrating behavioral change models.	2
Laboratory Work #5 – Assessing Social and Environmental Determinants in the Community Students conduct a mini field observation to identify local determinants of health and propose socio-environmental interventions for equity promotion.	2
Laboratory Work #6 – Clinical Identification and Management of Risk Factors Case-based exercises classifying modifiable and non-modifiable risk factors, calculating risk scores, and formulating targeted intervention strategies.	2
Laboratory Work #7 – Public Health Policy Simulation and Policy Brief Writing Students participate in a policy negotiation simulation and draft a concise policy brief addressing a current public health issue.	2

Minimum References:
1. Scriven A, Hodgins M. Health promotion . 4th ed. London: SAGE Publications; 2020.
2. Naidoo J, Wills J. Foundations for health promotion . 4th ed. London: Elsevier; 2016.
3. World Health Organization. Health promotion: global principles and practice . Geneva: World Health Organization; 2021.
4. Stanhope M, Lancaster J. Public health nursing: population-centered health care in the community . 10th ed. St. Louis: Elsevier; 2020.
5. Teaching support materials

Correlation of the contents of the discipline with the expectations of the representatives of the epistemic community, professional associations and representative employers in the health sector
•

How the information is transmitted	
Type of Activity	Teaching methods used
Lecture	<ul style="list-style-type: none"> Systematic and structured presentation of the fundamental principles of health promotion, focusing on the determinants of

How the information is transmitted	
	health, prevention strategies, lifestyle and behavioral interventions, and public health policies, delivered through oral exposition and interactive question-and-answer discussions.
Laboratory (Practical Work)	•

Minimal performance standards – the minimum level of activities that need to be fulfilled by the student during the practical works to be accepted to the final laboratory exam:
<ul style="list-style-type: none"> • Attendance of at least 70% of all practical sessions, with mandatory completion of all missed activities, including absences recorded during mid-semester evaluations. • Completion of thematic assignments to support the understanding of fundamental concepts corresponding to each practical session. • Identification of basic anatomical structures using a variety of educational materials: skeletal models, osteological collections, anatomical specimens, topographic sections, preserved human cadavers, 3D anatomical casts, as well as classical iconography and medical imaging (X-ray, CT, MRI). • Active and interactive participation during practical sessions, including responses to the instructor's questions, involvement in discussions, and application of theoretical knowledge in practice. • Use of the virtual dissection table to deepen the understanding of three-dimensional topographical relationships and to correlate findings with classical dissection and imaging techniques. • Exploration and consolidation of taught concepts through projected digital anatomical atlases (e.g., Netter, Thieme) to enhance visual anatomical learning.

Minimum set of activities that must be performed by the student in the practical exam in order to be admitted to the exam (final verification): obtaining an average of 5 in the practical exams of anatomy and embryology
<ul style="list-style-type: none"> • Attainment of a minimum average grade of 5 (five) in all practical tests and evaluations conducted throughout the semester. • Demonstrated ability to identify major anatomical structures using various educational tools: anatomical specimens, dissected cadaveric material, 3D anatomical models, and the virtual dissection table.

Specific conditions for carrying out the theoretical and practical activities of the discipline:
<ul style="list-style-type: none"> • Active participation of the student in lectures and practical sessions, including attendance at demonstrative activities using the virtual dissection table and projected anatomical atlases. • Successful completion of colloquia and practical-applied examinations in anatomy and embryology, as mandatory stages in the validation of specific competencies. • Continuous engagement in the learning process through individual study and teamwork, to ensure the assimilation of fundamental knowledge and the ability to establish anatomo-clinical correlations in an interdisciplinary context.

Consideration points for computing the final score:	Percentage share of scoring (Total = 100%)
- Responses to the final exam	60 %
- Responses to the laboratory examination	15 %

- Periodic checks with written exams	10 %
- Continuous testing through the semester	10 %
- Projects / Translations / Posters / Essays, etc.	-
- Other activities:	5 %

Description of the actual methods of examination – E

- The final examination consists of an oral presentation of three topics randomly selected by the student, one from each of the following categories:
 - Topics from lecture content;
 - Topics from practical work.
- All examination topics are published and communicated to students at the beginning of the semester, ensuring effective and transparent preparation.
- The exam is conducted in groups of at least three students, in the presence of the course coordinator, the head of practical activities, and the teaching assistant who supervised the group during the semester.
- Students are granted thinking time, and the assessment is carried out in a transparent and supportive environment, allowing for coherent and logical articulation of knowledge.
- The choice of oral examination is justified by the nature of the medical profession, where verbal communication is essential, and by the need to assess the student's ability to establish anatomo-clinical correlations.

Minimal requirements for grade 5 (or how grade 5 is awarded)	Requirements for grade 10 (or how grade 10 is awarded)
<ul style="list-style-type: none"> • Attendance of at least 70% of practical sessions, with mandatory completion of all missed activities. • Completion of all three colloquia during the semester, with a minimum grade of 5 in at least two of them (colloquia may be retaken if failed). • Submission of practical session assignments and demonstration of knowledge of basic concepts. • Achievement of an average grade of 5 in the practical examinations in anatomy and embryology. • Provision of minimally correct answers to the three oral exam topics, demonstrating understanding of the fundamental requirements of the discipline. 	<ul style="list-style-type: none"> • Achievement of an average grade above 9 in all three colloquia during the semester. • An average above 9 in the practical anatomy and embryology examinations, including accurate anatomical identification and anatomo-clinical justification. • Delivery of coherent, complete, and clinically correlated answers to all three oral exam topics, demonstrating advanced competencies and the ability to synthesize and integrate anatomical knowledge.

Date of completion

15.09.2025

**Discipline Coordinator,
Rusu Elena, Assoc. Professor, PhD**

Head of Department,

**Ioan Sorin Tudorache, Assoc. Professor, M.D.,
PhD**

**Course Coordinator,
Rusu Elena, Assoc. Professor, PhD**

Laboratory Coordinator,

**Department Approval Date
18.09.2025**



DISCIPLINE FILE

Faculty	MEDICINE
Department	MEDICO-SURGICAL AND PROPHYLACTIC DISCIPLINES
Field of study	HEALTHCARE
Study cycle	BACHELOR
Study programme	MEDICINE IN ENGLISH

Discipline`s Name	EUROPEAN PROJECT MANAGEMENT				
Didactic position, name and surname of the Discipline Coordinator	Cauni Victor Mihail, Professor				
Didactic position, name and surname for the Course Coordinator	Cauni Victor Mihail, Professor				
Didactic position, name and surname for the Coordinator of the Seminar / Laboratory / Clinical Traineeship	Luca Andrei, Assoc. Professor, M.D., PhD				
Discipline Code	MLE.O.7	Formative category of the discipline		DS	
Year of Study	II	Semester	4	Type of the final evaluation (E, V)	V4
Discipline Regime (M -mandatory, E -elective)				E	No. of credits
					1

No. of Hours per week	2	Out of which are Course hours:	1	Seminar / Practical Activity / Clinical Stage	1
Total of hours in the curriculum	28	Out of which are Course hours:	14	Seminar / Practical Activity / Clinical Stage	14
		Total hours per semester	50	Total hours of individual study	22

Distribution of time pool per week					Hours
1. Study of the course material					1
2. Study according with the course support, manuals					7
3. Study of the minimal bibliography					1
4. Additional documentation in the library					1
5. Specific activity for the seminary or laboratory					1

Distribution of time pool per week	Hours
6. Homework, translations, etc.	0
7. Preparing for different written exams	1
8. Preparing for oral examinations	0
9. Preparing for the final examination	3
10. Consultations	1
11. In the field documentation	0
12. Documentation from web sources, portals, wiki websites	3
13. Tutoring	2
14. Examinations	2
15. Other activities:	0

Course name	EUROPEAN PROJECT MANAGEMENT
Specific professional competencies	<ul style="list-style-type: none"> • Demonstrate a comprehensive understanding of core project management concepts, including project definition, life cycle phases, stakeholder and shareholder roles, decision-making processes, work breakdown structures, critical path analysis, budgeting, resource allocation, risk assessment, monitoring and evaluation techniques, project logic diagrams, SWOT analysis, PERT analysis, and SMART criteria. • Understand the strategic role of the project manager within organizational structures and the interdependence between time, cost, and performance indicators. • Apply theoretical knowledge to analyze the internal and external environment of an organization, estimate costs, build and coordinate project teams, and conduct project monitoring and evaluation processes. • Differentiate between activities and actions, as well as between efficiency and effectiveness, while recognizing the critical importance of structured planning in project execution. • Utilize specialized project management tools such as SWOT and PERT analyses, work breakdown structures, Gantt charts, and project budgeting instruments. • Plan and allocate project-specific resources effectively across timelines. • Conceptualize and manage sets of routine or strategic activities as structured projects.
Transversal competencies	<ul style="list-style-type: none"> • Integrate project management principles with broader management disciplines and organizational functions. • Collaborate effectively within multidisciplinary teams. • Make informed, evidence-based decisions in complex project environments.
General objectives of the discipline	<ul style="list-style-type: none"> • To develop foundational and applied knowledge in managing health-related and interdisciplinary European projects.

Specific objectives of the discipline	<ul style="list-style-type: none"> • To enhance analytical and synthetic reasoning skills. • To strengthen organizational and planning capabilities. • To develop the ability to comprehend complex project dynamics. • To cultivate evaluation and self-assessment skills. • To promote effective teamwork and collaborative project execution.
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Learning Outcomes	
Knowledge	Students identify the fundamental concepts and terminology of project management, including project life cycle phases, stakeholders, and project governance, describe the principles of planning, scheduling, budgeting, and risk management in European-funded projects, explain the role of project management tools such as work breakdown structures, Gantt charts, SWOT analysis, PERT analysis, and SMART objectives in project planning and evaluation.
Skills	Students interpret project structures and management processes in the context of European-funded initiatives, analyze project parameters such as time, cost, resources, and risks using appropriate project management tools, integrate project management principles in the analysis of organizational and interdisciplinary project environments.
Responsibilities/ Autonomy	Students apply planning and monitoring techniques to develop and evaluate simplified project proposals and implementation plans, formulate conclusions regarding project feasibility, risk management, and resource allocation based on project data, demonstrate responsible participation in collaborative project planning and decision-making processes.

Course Syllabus	Hours
Course #1 – The Project Concept Introduction to the definition, nature, and classification of projects. Analysis of project-specific constraints (time, cost, scope) and their interdependence. Overview of the European context in project development and funding.	1
Course #2 – Historical and Strategic Evolution of Project Management Exploration of the historical development of project management methodologies. Emphasis on how European integration and funding mechanisms have influenced project frameworks and strategic orientations.	1
Course #3 – Fundamentals of Project Management Examination of the core principles, roles, and responsibilities within project management. Identification of best practices and discussion of common challenges in managing European-funded projects.	1
Course #4 – The Project Life Cycle Comprehensive breakdown of the five major phases of a project: initiation, planning, execution, monitoring and control, and closure. Discussion of key deliverables and responsibilities within each phase.	1
Course #5 – Core Concepts in European Project Management Clarification of essential terminology and tools: objectives, indicators, deliverables, milestones, stakeholders, project governance, and logic frameworks. Introduction to the project charter and scope definition.	1

Course Syllabus	Hours
Course #6 – Time Management and Project Scheduling Techniques for planning and controlling time within projects. Application of tools such as Gantt charts, network diagrams, Critical Path Method (CPM), and Program Evaluation and Review Technique (PERT).	1
Course #7 – Project Cost and Budget Management Methods of cost estimation, budgeting, and financial monitoring. Emphasis on cost control techniques, variance analysis, and budget compliance in accordance with European funding guidelines.	1
Course #8 – Risk Management in European Projects Identification, qualitative and quantitative analysis, and response planning for project risks. Strategies for mitigation, contingency planning, and tools for continuous risk monitoring and control.	1
Course #9 – Resource Management and Team Dynamics Principles of resource allocation, workload balancing, and team coordination. Management of human resources, equipment, and materials. Approaches to team motivation, leadership, and conflict resolution.	1
Course #10 – Communication and Stakeholder Management Development of effective communication strategies within project teams and with external stakeholders. Mapping stakeholder influence and expectations. Use of communication plans and feedback loops.	1
Course #11 – Quality Management in Projects Quality planning, assurance, and control processes. Implementation of quality standards and performance indicators in European projects. Monitoring compliance and delivering value-based outcomes.	1
Course #12 – Monitoring, Evaluation, and Performance Measurement Introduction to monitoring systems and evaluation frameworks. Use of performance metrics, indicators, and reporting tools for ongoing and post-project evaluation. Alignment with EU evaluation standards.	1
Course #13 – Tools and Techniques in Project Management Practical applications of key project tools: Work Breakdown Structure (WBS), Gantt charts, PERT analysis, SMART objectives, SWOT analysis. Hands-on review of project planning software and budgeting templates.	1
Course #14 – Ethical Considerations and Final Integration Workshop Discussion of ethical issues, transparency, and compliance in European project management. Final case study analysis integrating project lifecycle, budgeting, risk, and resource management for full-scope understanding.	1

Laboratory Syllabus	Hours
Laboratory Work #1 – Project Identification and Classification Workshop Students analyze sample project descriptions, classify project types, and map constraints (time–cost–scope) to real European-funded project scenarios.	1
Laboratory Work #2 – Timeline Exercise: Evolution of Project Management Creation of a historical timeline of project management methodologies and EU funding milestones. Group discussion on how these shifts impact current project strategies.	1
Laboratory Work #3 – Project Management Roles and Responsibility Mapping Case-based identification of project roles (manager, beneficiary, partners). Students identify challenges and propose best-practice solutions for European-funded projects.	1
Laboratory Work #4 – Project Life Cycle Simulation	1

Laboratory Syllabus	Hours
Teams work through a simplified project cycle—from initiation to closure—defining key deliverables, responsibilities, and documentation for each phase.	
Laboratory Work #5 – Logic Framework and Project Charter Development Students build a mini Logical Framework Matrix (LogFrame), define objectives and indicators, draft a basic project charter, and outline project scope boundaries.	1
Laboratory Work #6 – Scheduling Lab: Gantt, Network Diagram, and Critical Path Analysis Hands-on creation of Gantt charts and network diagrams. Students calculate the Critical Path and interpret PERT estimates using provided task datasets.	1
Laboratory Work #7 – Budget Building and Cost Control Exercise Students develop a project budget following EU funding rules. Activities include cost estimation, constructing a budget table, and performing variance analysis on simulated financial reports.	1
Laboratory Work #8 – Risk Assessment Matrix and Mitigation Planning Teams identify risks from sample project cases and construct qualitative and quantitative risk matrices. Students propose mitigation and contingency strategies..	1
Laboratory Work #9 – Resource Allocation and Team Dynamics Role-Play Practice allocating human, material, and financial resources under constraints. Role-play exercises address team motivation, conflict resolution, and leadership challenges.	1
Laboratory Work #10 – Stakeholder Mapping and Communication Strategy Design Students identify stakeholders for a model project, map influence vs. interest, and develop a concise communication plan including channels, frequency, and responsibilities.	1
Laboratory Work #11 – Quality Standards and Compliance Review Using predefined project scenarios, students develop quality criteria and monitoring tools. They evaluate deliverables for compliance with EU quality and reporting standards.	1
Laboratory Work #12 – Monitoring and Evaluation Dashboard Activity Students construct simple M&E dashboards using indicators and metrics. They analyze mock project reports and generate short performance summaries aligned with EU evaluation norms.	1
Laboratory Work #13 – Project Tools Hands-On Lab Practical creation of a Work Breakdown Structure (WBS), SMART objectives, SWOT analyses, and PERT diagrams. Introduction to project planning and budgeting software.	1
Laboratory Work #14 – Final Integrated Project Case Study Capstone activity where teams integrate all learned components - lifecycle planning, budgeting, scheduling, risk management, resources, and ethics - to design a complete mini-project proposal.	1

Minimum References:
1. European Commission. <i>EU4Health Programme 2021–2027: A Vision for a Healthier European Union</i> . Brussels: European Commission; 2021. Available from: https://health.ec.europa.eu/funding/eu4health_en
2. Rechel B, Maresso A, Sagan A, Hernández-Quevedo C, Richardson E, McKee M, editors. <i>Organization and Financing of Public Health Services in Europe: Country Reports</i> . Copenhagen: WHO Regional Office for Europe; 2018. (Health Policy Series, No. 50).
3. Mladovsky P, Rechel B, Ingleby D, McKee M. Responding to diversity: an exploratory study of migrant health policies in Europe. <i>Health Policy</i> . 2012;105(1):1–9.
4. European Commission. <i>Better Health for All: EU Health Programme Projects 2003–2020</i> . Luxembourg: Publications Office of the European Union; 2020. Available from: https://op.europa.eu/en/publication-detail/-/publication/1e2a245f-97d2-11eb-b85c-01aa75ed71a1

Minimum References:

5. EUPHA – European Public Health Association. *Public Health Innovation and Project Management in Europe*. Utrecht: EUPHA; 2019. Available from: <https://eupha.org/>
6. Teaching support materials

Correlation of the contents of the discipline with the expectations of the representatives of the epistemic community, professional associations and representative employers in the health sector

- Aligns with the standards and recommendations set by the epistemic community in health sciences, ensuring scientific rigor, interdisciplinary integration, and alignment with current medical research and evidence-based practice.
- Responds to the competency frameworks promoted by professional medical associations (e.g., national colleges of physicians, European medical boards), particularly in areas of project-based healthcare innovation, research coordination, and public health program implementation.
- Supports the development of skills relevant to medical leadership, clinical research management, and health policy design, as increasingly required by hospitals, research institutions, and public health agencies.
- Addresses the growing demand from employers in the health sector for professionals capable of managing EU-funded health initiatives, multidisciplinary research collaborations, and institutional development projects.
- Emphasizes transferable skills (project planning, resource coordination, risk and quality management) that reflect employer expectations for adaptability, efficiency, and accountability in complex medical environments.
- Encourages integration of project management principles into clinical, educational, and research activities, reflecting the modern health system's emphasis on structured, outcome-oriented programs.

How the information is transmitted

Type of Activity	Teaching methods used
Lecture	<ul style="list-style-type: none"> • Systematic and structured presentation of the fundamental principles of European project management, focusing on the development, implementation, and evaluation of projects in the fields of healthcare, public health, and medical research, delivered through oral exposition and interactive question-and-answer discussions.
Laboratory (Practical Work)	<ul style="list-style-type: none"> • Practical activities focused on the preparation and analysis of European project proposals, with emphasis on project planning, teamwork, and evaluation within healthcare and research contexts.

Minimal performance standards – the minimum level of activities that need to be fulfilled by the student during the practical works to be accepted to the final laboratory exam:

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Minimum set of activities that must be performed by the student in the practical exam in order to be admitted to the exam (final verification): obtaining an average of 5 in the practical exams

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Specific conditions for carrying out the theoretical and practical activities of the discipline:

- Theoretical activities are conducted in a lecture-based format using multimedia presentations (e.g., PowerPoint), supported by case examples and interactive discussions to facilitate applied understanding.

Consideration points for computing the final score:	Percentage share of scoring (Total = 100%)
- Responses to the final exam	70 %
- Responses to the laboratory examination	0 %
- Periodic checks with written exams	0 %
- Continuous testing through the semester	15 %
- Projects / Translations / Posters / Essays, etc.	15 %
- Other activities:	0 %
Description of the actual methods of examination – E	
<ul style="list-style-type: none"> Multiple choice examination 	
Minimal requirements for grade 5 (or how grade 5 is awarded)	Requirements for grade 10 (or how grade 10 is awarded)
<ul style="list-style-type: none"> According to the correction scale At least half of the topics must be correct 	<ul style="list-style-type: none"> According to the correction scale At least 90% correct topics

Date of completion

12.09.2025

**Discipline Coordinator,
Cauni Victor Mihail, Professor**

**Head of Department,
Dan Ulmeanu, Assoc. Professor, M.D., PhD**

**Course Coordinator,
Cauni Victor Mihail, Professor**

**Laboratory Coordinator,
Luca Andrei, Assoc. Professor, M.D., PhD**

Department Approval Date

18.09.2025



DISCIPLINE FILE

Faculty	MEDICINE
Department	PRECLINICAL SCIENCES
Field of study	HEALTHCARE
Study cycle	BACHELOR
Study programme	MEDICINE IN ENGLISH

Discipline`s Name	FINANCIAL ORGANIZATION OF MEDICAL PROFESSION				
Didactic position, name and surname of the Discipline Coordinator	Oncioiu Ionica, Professor				
Didactic position, name and surname for the Course Coordinator	Oncioiu Ionica, Professor				
Didactic position, name and surname for the Coordinator of the Seminar / Laboratory / Clinical Traineeship	-				
Discipline Code	MLE.O.8	Formative category of the discipline		DS	
Year of Study	II	Semester	4	Type of the final evaluation (E, V)	V4
Discipline Regime (M -mandatory, E -elective)				E	No. of credits
					1

No. of Hours per week	2	Out of which are Course hours:	1	Seminar / Practical Activity / Clinical Stage	1
Total of hours in the curriculum	28	Out of which are Course hours:	14	Seminar / Practical Activity / Clinical Stage	14
		Total hours per semester	50	Total hours of individual study	22

Distribution of time pool per week					Hours
1. Study of the course material					1
2. Study according with the course support, manuals					7
3. Study of the minimal bibliography					1
4. Additional documentation in the library					1
5. Specific activity for the seminary or laboratory					1

Distribution of time pool per week	Hours
6. Homework, translations, etc.	0
7. Preparing for different written exams	1
8. Preparing for oral examinations	0
9. Preparing for the final examination	3
10. Consultations	1
11. In the field documentation	0
12. Documentation from web sources, portals, wiki websites	3
13. Tutoring	2
14. Examinations	2
15. Other activities:	0

Course name	FINANCIAL ORGANIZATION OF MEDICAL PROFESSION
Specific professional competencies	<ul style="list-style-type: none"> • Understanding the legal, ethical, and organizational framework governing medical practice at national and European levels. • Identifying the financial and institutional mechanisms that regulate healthcare systems, including health insurance structures and healthcare providers. • Interpreting legislative provisions regarding medical liability, malpractice, and professional accountability. • Applying principles of medical law, ethics, and healthcare organization in the analysis of clinical and administrative situations. • Recognizing the regulatory framework of healthcare institutions and the professional obligations of physicians.
Transversal competencies	<ul style="list-style-type: none"> • Development of analytical and critical thinking in interpreting medical legislation and ethical dilemmas. • Effective communication of legal and ethical concepts related to medical practice in academic and professional contexts. • Ability to work collaboratively in the analysis of medico-legal cases and healthcare management scenarios. • Demonstration of professional responsibility, ethical conduct, and respect for patients' rights. • Use of legal and informational resources to support evidence-based decision-making in healthcare contexts.
General objectives of the discipline	<ul style="list-style-type: none"> • To provide fundamental knowledge regarding the legal, ethical, and financial organization of the medical profession. • To develop the ability to understand the regulatory and institutional framework governing healthcare systems. • To familiarize students with the principles of professional accountability, medical liability, and patient rights. • To establish the foundations for responsible and ethical medical practice within the healthcare system.
Specific objectives of the discipline	<ul style="list-style-type: none"> • Identify the main legal and institutional structures regulating medical practice in Romania and the European Union. • Explain the principles governing the organization and financing of healthcare systems and medical institutions.

	<ul style="list-style-type: none"> Analyze patients' rights and physicians' professional obligations within medical legislation. Understand the mechanisms of medical malpractice, professional liability, and disciplinary procedures. Interpret ethical and legal aspects of biomedical research, transplantation, psychiatric care, and end-of-life decisions.
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Learning Outcomes	
Knowledge	Students identify the legal and institutional framework governing the medical profession and healthcare systems, describe the principles of medical legislation, professional ethics, and patient rights, explain the mechanisms of healthcare organization, professional accountability, and medical malpractice liability.
Skills	Students interpret legal and ethical provisions relevant to clinical practice and healthcare management, analyze medico-legal cases related to professional responsibility, malpractice, and patient rights, apply legislative and ethical principles to evaluate situations encountered in medical practice.
Responsibilities/ Autonomy	Students integrate legal and ethical concepts into the interpretation of professional medical responsibilities, formulate conclusions regarding medico-legal situations based on legislative and ethical frameworks, demonstrate responsible and ethical behavior in academic discussions and professional decision-making contexts.

Laboratory Syllabus	Hours
Laboratory Work #1 – Identifying Legal Sources in Medical Practice Students practice locating and interpreting Romanian and EU legislative texts relevant to healthcare	1
Laboratory Work #2 – Recognition of Professional Qualifications Case Workshop Analysis of cross-border mobility scenarios; determining compliance with EU directives on professional recognition.	1
Laboratory Work #3 – Ethical Decision-Making Exercises Using the Medical Code of Ethics Application of ethical principles to simulated clinical dilemmas involving confidentiality, consent, and conflict of interest.	1
Laboratory Work #4 – Disciplinary Procedure Simulation (College of Physicians) Mock disciplinary hearing with roles assigned to physician, complainant, and disciplinary panel.	1
Laboratory Work #5 – Case Studies on Patients' Rights (I) Interpretation of real or hypothetical cases involving informed consent, privacy violations, and access to care.	1
Laboratory Work #6 – Case Studies on Patients' Rights (II) Focus on minors, psychiatric care, and emergency situations where consent is limited or waived.	1
Laboratory Work #7 – Health System Organization Workshop Students map out the structure of a hospital or medical practice, identifying legal obligations and insurance relationships	1
Laboratory Work #8 – Medical Malpractice Case Analysis Review of malpractice scenarios; identifying breaches of duty, causation, and legal consequences.	1

Laboratory Syllabus	Hours
Laboratory Work #9 – Liability Mapping Exercise Differentiation between physician, hospital, and insurer liability through structured case examples.	1
Laboratory Work #10 – Criminal vs. Civil Liability Problem-Solving Students classify legal situations and determine criminal, civil, or dual liability implications.	1
Laboratory Work #11 – Bioethical Debate: Genetics and Human Rights Debate on ethical challenges in genetics, eugenics, patient autonomy, and legislative safeguards.	1
Laboratory Work #12 – Transplant Law and Assisted Reproduction Casework Interpretation of transplant legislation and assisted reproduction policies through case-based analysis.	1
Laboratory Work #13 – Psychiatric Ethics Interactive Scenario Simulation involving involuntary admission, capacity assessment, and ethical justifications.	1
Laboratory Work #14 – End-of-Life Decision-Making Workshop Case-based discussion on euthanasia, assisted suicide, treatment withdrawal, and legal considerations.	1

Minimum References:
1. Getzen TE. Health economics and financing . 6th ed. Hoboken (NJ): Wiley-Blackwell; 2020.
2. Morris S, Devlin N, Parkin D. Economic analysis in health care . 2nd ed. Chichester: Wiley-Blackwell; 2012.
3. Folland S, Goodman AC, Stano M. The economics of health and health care . 8th ed. New York: Routledge; 2016.
4. OECD. Health at a glance: Europe 2022 – state of health in the EU cycle . Paris: OECD Publishing; 2022.
5. Teaching support materials

Correlation of the contents of the discipline with the expectations of the representatives of the epistemic community, professional associations and representative employers in the health sector
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How the information is transmitted	
Type of Activity	Teaching methods used
Lecture	<ul style="list-style-type: none"> Systematic and structured presentation of the fundamental principles of the financial organization of the medical profession, focusing on healthcare financing systems, management of medical resources, and the economic aspects of medical practice, delivered through oral exposition and interactive question-and-answer discussions.
Laboratory (Practical Work)	<ul style="list-style-type: none">

Minimal performance standards – the minimum level of activities that need to be fulfilled by the student during the practical works to be accepted to the final laboratory exam:
<ul style="list-style-type: none"> Attendance of at least 70% of all practical sessions, with mandatory completion of all missed activities, including absences recorded during mid-semester evaluations.

Minimal performance standards – the minimum level of activities that need to be fulfilled by the student during the practical works to be accepted to the final laboratory exam:

- Completion of thematic assignments to support the understanding of fundamental concepts corresponding to each practical session.
- Identification of basic anatomical structures using a variety of educational materials: skeletal models, osteological collections, anatomical specimens, topographic sections, preserved human cadavers, 3D anatomical casts, as well as classical iconography and medical imaging (X-ray, CT, MRI).
- Active and interactive participation during practical sessions, including responses to the instructor’s questions, involvement in discussions, and application of theoretical knowledge in practice.
- Use of the virtual dissection table to deepen the understanding of three-dimensional topographical relationships and to correlate findings with classical dissection and imaging techniques.
- Exploration and consolidation of taught concepts through projected digital anatomical atlases (e.g., Netter, Thieme) to enhance visual anatomical learning.

Minimum set of activities that must be performed by the student in the practical exam in order to be admitted to the exam (final verification): obtaining an average of 5 in the practical exams of anatomy and embryology

- Attainment of a minimum average grade of 5 (five) in all practical tests and evaluations conducted throughout the semester.
- Demonstrated ability to identify major anatomical structures using various educational tools: anatomical specimens, dissected cadaveric material, 3D anatomical models, and the virtual dissection table.

Specific conditions for carrying out the theoretical and practical activities of the discipline:

- Active participation of the student in lectures and practical sessions, including attendance at demonstrative activities using the virtual dissection table and projected anatomical atlases.
- Successful completion of colloquia and practical-applied examinations in anatomy and embryology, as mandatory stages in the validation of specific competencies.
- Continuous engagement in the learning process through individual study and teamwork, to ensure the assimilation of fundamental knowledge and the ability to establish anatomo-clinical correlations in an interdisciplinary context.

Consideration points for computing the final score:	Percentage share of scoring (Total = 100%)
- Responses to the final exam	60 %
- Responses to the laboratory examination	15 %
- Periodic checks with written exams	10 %
- Continuous testing through the semester	10 %
- Projects / Translations / Posters / Essays, etc.	-
- Other activities:	5 %

Description of the actual methods of examination – E

- The final examination consists of an oral presentation of three topics randomly selected by the student, one from each of the following categories:

<ul style="list-style-type: none"> • Topics from lecture content; • Topics from practical work. <ul style="list-style-type: none"> • All examination topics are published and communicated to students at the beginning of the semester, ensuring effective and transparent preparation. • The exam is conducted in groups of at least three students, in the presence of the course coordinator, the head of practical activities, and the teaching assistant who supervised the group during the semester. • Students are granted thinking time, and the assessment is carried out in a transparent and supportive environment, allowing for coherent and logical articulation of knowledge. • The choice of oral examination is justified by the nature of the medical profession, where verbal communication is essential, and by the need to assess the student's ability to establish anatomo-clinical correlations. 	
Minimal requirements for grade 5 (or how grade 5 is awarded)	Requirements for grade 10 (or how grade 10 is awarded)
<ul style="list-style-type: none"> • Attendance of at least 70% of practical sessions, with mandatory completion of all missed activities. • Completion of all three colloquia during the semester, with a minimum grade of 5 in at least two of them (colloquia may be retaken if failed). • Submission of practical session assignments and demonstration of knowledge of basic concepts. • Achievement of an average grade of 5 in the practical examinations in anatomy and embryology. • Provision of minimally correct answers to the three oral exam topics, demonstrating understanding of the fundamental requirements of the discipline. 	<ul style="list-style-type: none"> • Achievement of an average grade above 9 in all three colloquia during the semester. • An average above 9 in the practical anatomy and embryology examinations, including accurate anatomical identification and anatomo-clinical justification. • Delivery of coherent, complete, and clinically correlated answers to all three oral exam topics, demonstrating advanced competencies and the ability to synthesize and integrate anatomical knowledge.

Date of completion

15.09.2025

**Discipline Coordinator,
Oncioiu Ionica, Professor**

Head of Department,

**Ioan Sorin Tudorache, Assoc. Professor, M.D.,
PhD**

**Course Coordinator,
Oncioiu Ionica, Professor**

Laboratory Coordinator,

Department Approval Date

18.09.2025