**TITU MAIORESCU UNIVERSITY OF BUCHAREST**
**FACULTY OF MEDICINE**
**MEDICINE IN ENGLISH PROGRAM**
**ACADEMIC YEAR: 2025-2026**

# DISCIPLINE FILE

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

| | | | | | | |
|---|---|---|---|---|---|---|
| Discipline`s Name | **MEDICAL SEMIOLOGY (I)** | | | | | |
| Didactic position, name and surname of the **Discipline Coordinator** | Lect. Soare Simona, MD, PhD | | | | | |
| Didactic position, name and surname for the **Course Coordinator** | Lect. Soare Simona, MD, PhD | | | | | |
| Didactic position, name and surname for the **Coordinator** of the **Seminar / Laboratory / Clinical Traineeship** | Lect. Munteanu Alice<br>PhD.Candidate Popescu Alexandru | | | | | |
| Discipline Code | **MLE.3.5.1** | Formative category of the discipline | | **DS** | | |
| Year of Study | **III** | Semester | **5** | Type of the final evaluation (**E, V**) | | **E5** |
| Discipline Regime (**M**-**m**andatory, **E**-**e**lective) | | | | **M** | No. of credits | **5** |

| | | | | | |
|---|---|---|---|---|---|
| No. of Hours per week | **7** | Out of which are Course hours: | **2** | Seminar / Practical Activity / Clinical Stage | **5** |
| Total of hours in the curriculum | **98** | Out of which are Course hours: | **28** | Seminar / Practical Activity / Clinical Stage | **70** |
| | | Total hours per semester | **125** | Total hours of individual study | **27** |

| **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 | 5 |
| 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 | 4 |
| 13. Tutoring | 2 |
| 14. Examinations | 2 |
| 15. Other activities: | 0 |

| **Course name** | MEDICAL SEMIOLOGY (I) |
|---|---|
| **Specific professional competencies** | C1 – Identification and interpretation of clinical signs and symptoms;<br>C2 – Application of clinical examination techniques for diagnostic orientation. |
| **Transversal competencies** | C5 – Effective doctor–patient communication; C6 – Ethical and responsible professional conduct. |
| **General objectives of the discipline** | To provide fundamental knowledge regarding the core scope of Medical Semiology (I).<br>To develop understanding of clinical assessment and diagnostic reasoning relevant to Medical Semiology (I).<br>To familiarize students with evidence-based principles, practical applications and patient-safety considerations in Medical Semiology (I).<br>To establish a foundation for supervised clinical practice, academic reasoning and interdisciplinary collaboration in Medical Semiology (I). |
| **Specific objectives of the discipline** | Identify common concepts, clinical presentations or practical situations addressed in Medical Semiology (I).<br>Explain key mechanisms, diagnostic principles and professional standards relevant to Medical Semiology (I).<br>Interpret essential clinical, laboratory, imaging, histopathological, epidemiological or technological data when applicable.<br>Apply discipline-specific reasoning to formulate appropriate diagnostic, therapeutic, preventive or procedural approaches under supervision.<br>Demonstrate responsible communication, documentation, teamwork and patient-safety awareness in academic and clinical contexts. |

| **Learning Outcomes** | |
|---|---|
| Knowledge | Identify and explain the fundamental principles of clinical examination, medical history taking and the semiological interpretation of signs and symptoms related to major organ systems. |
| Skills | Perform structured patient history taking and systematic physical examination using inspection, palpation, percussion and auscultation techniques; recognize normal and pathological clinical signs. |
| Responsabilities/ Autonomy | Integrate clinical data obtained during examination to formulate preliminary diagnostic hypotheses and communicate findings responsibly under supervision. |

| Course Syllabus | Hours |
|---|---|
| **Course #1 – Introduction to Medical Semiology**<br>Definition and scope of medical semiology. Clarification of key concepts: symptom, clinical sign, clinical (objective) examination, diagnosis, syndrome, and disease. | 2 |
| **Course #2 – Anamnesis – Concepts and Importance**<br>Types and methods of anamnesis. Patient approach, interview techniques, observation sheet structure, and the role of anamnesis in diagnosis. | 2 |
| **Course #3 – Technical Stages of Anamnesis**<br>Detailed steps for conducting a complete and structured anamnesis. Emphasis on data gathering and clinical relevance. | 2 |
| **Course #4 – General Objective Clinical Examination – Techniques**<br>Core methods of physical examination: inspection, palpation, percussion, and auscultation. Introduction to their application in routine patient assessment. | 2 |
| **Course #5 – General Objective Examination – Psychic Status**<br>Evaluation of mental status: perception, thought processes, affective states, consciousness levels, and patient behavior. | 2 |
| **Course #6 – General Objective Examination – Constitutional Type**<br>Observation of static and dynamic aspects: body posture, movement disorders, physiognomy, skin color changes, and overall appearance. | 2 |
| **Course #7 – General Objective Examination – Skin and Lymphatic Signs**<br>Assessment of primary lesions, skin hemorrhages, ganglionary system, nutritional status, edema, adenopathy, and signs of collateral circulation. | 2 |
| **Course #8 – Semiology of the Locomotor System**<br>Symptoms and signs related to musculoskeletal disorders. Complementary examinations: radiology, joint fluid analysis, blood tests, histopathology. | 2 |
| **Course #9 – Semiology of the Respiratory System**<br>Respiratory symptoms (pain, dyspnea, cough, sputum, hemoptysis). Physical and objective respiratory examination. Diagnostic tools: radiography, pleural puncture, and pulmonary function tests. | 2 |
| **Course #10 – Pulmonary Condensation Syndrome**<br>Etiology, clinical signs, and diagnostic features of lung consolidation. Interpretation of physical findings and supporting investigations. | 2 |
| **Course #11 – Pleural Syndrome**<br>Recognition of pleural effusion, pleuritis, and associated clinical signs. Focus on percussion, auscultation, and imaging. | 2 |
| **Course #12 – Bronchial Syndrome (Part I)**<br>Characterization of bronchial inflammation and obstruction. Symptoms, physical findings, and differential diagnosis. | 2 |
| **Course #13 – Bronchial Syndrome (Part II)**<br>Continuation of bronchial pathology. Deeper exploration of chronic bronchitis, asthma, and related conditions. | 2 |
| **Course #14 – Mediastinal Syndrome**<br>Clinical manifestations of mediastinal masses and pathology. Compression signs, respiratory and cardiovascular involvement, and diagnostic imaging. | 2 |

| Laboratory Syllabus | Hours |
|---|---|
| **Laboratory Work #1 – Anamnesis and General Symptoms** | 5 |

| Laboratory Syllabus | Hours |
|---|---|
| Practical demonstration of patient history-taking and observation sheet preparation. Assessment of general symptoms such as fever, chills, headache, asthenia, pruritus, and pain. Methods of objective examination and general inspection with patient examples. | |
| **Laboratory Work #2 – Skin, Mucous Membranes, and Musculoskeletal Examination** Clinical evaluation of skin and mucous membrane changes: pallor, erythema, cyanosis, jaundice, pigmentation disorders. Examination of subcutaneous tissue and identification of edema. Objective assessment of muscles, bones, and joints. Patient cases with rheumatic diseases. | 5 |
| **Laboratory Work #3 – Lymphatic and Hematologic Examination – Part I** Practical demonstration of lymph node palpation. Identification and classification of adenopathies. Clinical approach to hematologic diseases, especially anemias. Examples of collagen diseases. | 5 |
| **Laboratory Work #4 – Lymphatic and Hematologic Examination – Part II** Continuation of lymphatic and hematologic case presentations. Emphasis on diagnostic methods and interpretation in various anemia types and collagenoses. | 5 |
| **Laboratory Work #5 – Respiratory System Examination** Techniques in anamnesis and clinical evaluation of respiratory diseases. Demonstration of physical exam maneuvers and discussion of complementary investigations. | 5 |
| **Laboratory Work #6 – Respiratory Syndromes – Part I** Patient presentations of bronchitis, asthma, emphysema, and pulmonary condensation. Demonstration of pleural puncture and examination of pleural fluid. | 5 |
| **Laboratory Work #7 – Respiratory Syndromes – Part II** Clinical features of suppuration syndromes, cavitary lesions, respiratory failure, mediastinal syndrome, and pulmonary hypertension. Exploration methods discussed. | 5 |
| **Laboratory Work #8 – Cardiovascular System Examination – Part I** Assessment of cardiac symptoms and clinical signs. Demonstration of cardiac exam techniques. ECG reading and interpretation. Patient cases with valvulopathies and arrhythmias. | 5 |
| **Laboratory Work #9 – Cardiovascular System Examination – Part II** Clinical assessment of ischemic cardiopathies, myocardial infarction, cardiomyopathies, pericardial diseases, hypertension, hypotension, heart failure, and vascular syndromes. | 5 |
| **Laboratory Work #10 – Digestive System Examination – Part I** Anamnesis and objective examination of digestive complaints. Exploration of upper and lower digestive syndromes: dyspepsia, gastritis, ulcers, constipation, diarrhea, and anorectal symptoms. | 5 |
| **Laboratory Work #11 – Liver Examination** Clinical assessment of hepatomegaly and atrophic liver. Exploration methods demonstrated. Emphasis on real patient cases at bedside. | 5 |
| **Laboratory Work #12 – Advanced Liver Syndromes and Procedures** Clinical cases featuring jaundice, portal hypertension, ascites, liver failure, and hepatic encephalopathy. Demonstration of abdominal puncture. | 5 |
| **Laboratory Work #13 – Biliary and Pancreatic Syndromes** Anamnesis and examination techniques for biliary and pancreatic diseases. Exploration procedures and patient case studies with gallbladder and pancreatic pathologies. | 5 |
| **Laboratory Work #14 – Renal System Examination** History-taking and clinical examination of renal pathology. Diagnostic methods and case presentations of various kidney diseases. | 5 |

| Minimum References: |
|---|
| **1.** Bickley LS. **Bates' guide to physical examination and history taking**. 13th ed. Philadelphia: Wolters Kluwer; 2020. |
| **2.** Douglas G, Nicol F, Robertson C. **Macleod's clinical examination**. 15th ed. Edinburgh: Elsevier; 2020. |
| **3.** Talley NJ, O'Connor S. **Clinical examination: a systematic guide to physical diagnosis**. 8th ed. Chatswood (NSW): Elsevier; 2020. |
| **4.** Sapira JD. **The art and science of bedside diagnosis**. 5th ed. Philadelphia: Wolters Kluwer; 2014 |
| **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 | • Interactive learning based on logical and progressive presentation of content.<br>• Multimedia projection of lecture materials. |
| 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: |
|---|
| - |

| 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: |
|---|
| • 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 throught the semester | 15 % |
| - Projects / Translations / Posters / Essays, etc. | 15 % |
| - Other activities: | 0 % |
| | |
| **Description of the actual methods of examination – E** | |
| • Multiple choice examination | |

| Minimal requirements for grade 5<br>(or how grade 5 is awarded) | Requirements for grade 10<br>(or how grade 10 is awarded) |
|---|---|
| • According to the correction scale<br>• At least half of the topics must be correct | • According to the correction scale<br>• At least 90% correct topics |

**Date of completion**
**09.09.2025**

**Discipline Coordinator,**
**Lect. Soare Simona**

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

**Course Coordinator,**
**Lect. Soare Simona**

**Laboratory Coordinator,**
**Lect. Munteanu Alice**
**PhD.Candidate Popescu Alexandru**

**Department Approval Date**
**25.09.2025**

**TITU MAIORESCU UNIVERSITY OF BUCHAREST**
**FACULTY OF MEDICINE**
**MEDICINE IN ENGLISH PROGRAM**
**ACADEMIC YEAR: 2025-2026**

# DISCIPLINE FILE

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

| | | | | | |
|---|---|---|---|---|---|
| Discipline`s Name | **SURGICAL SEMIOLOGY (I)** | | | | |
| Didactic position, name and surname of the **Discipline Coordinator** | Assoc.Prof. Moldovan Alec Cosmin | | | | |
| Didactic position, name and surname for the **Course Coordinator** | Assoc.Prof. Moldovan Alec Cosmin | | | | |
| Didactic position, name and surname for the **Coordinator** of the **Seminar / Laboratory / Clinical Traineeship** | Assoc.Prof. Moldovan Alec Cosmin | | | | |
| Discipline Code | **MLE.3.5.2** | Formative category of the discipline | | **DS** | |
| Year of Study | **III** | Semester | **5** | Type of the final evaluation (**E, V**) | **E5** |
| Discipline Regime (**M**-**m**andatory, **E**-**e**lective) | | | **M** | No. of credits | **5** |

| | | | | | |
|---|---|---|---|---|---|
| No. of Hours per week | **7** | Out of which are Course hours: | **2** | Seminar / Practical Activity / Clinical Stage | **5** |
| Total of hours in the curriculum | **98** | Out of which are Course hours: | **28** | Seminar / Practical Activity / Clinical Stage | **70** |
| | | Total hours per semester | **125** | Total hours of individual study | **27** |

| **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 | 5 |
| 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 | 4 |
| 13. Tutoring | 2 |
| 14. Examinations | 2 |
| 15. Other activities: | 0 |

| **Course name** | SURGICAL SEMIOLOGY (I) |
|---|---|
| **Specific professional competencies** | C1 – Recognition of surgical signs and symptoms; C3 – Initial clinical evaluation of surgical conditions. |
| **Transversal competencies** | C5 – Team communication in clinical settings; C6 – Professional responsibility and ethics. |
| **General objectives of the discipline** | To provide fundamental knowledge regarding the core scope of Surgical Semiology (I).<br>To develop understanding of clinical assessment and diagnostic reasoning relevant to Surgical Semiology (I).<br>To familiarize students with evidence-based principles, practical applications and patient-safety considerations in Surgical Semiology (I).<br>To establish a foundation for supervised clinical practice, academic reasoning and interdisciplinary collaboration in Surgical Semiology (I). |
| **Specific objectives of the discipline** | Identify common concepts, clinical presentations or practical situations addressed in Surgical Semiology (I).<br>Explain key mechanisms, diagnostic principles and professional standards relevant to Surgical Semiology (I).<br>Interpret essential clinical, laboratory, imaging, histopathological, epidemiological or technological data when applicable.<br>Apply discipline-specific reasoning to formulate appropriate diagnostic, therapeutic, preventive or procedural approaches under supervision.<br>Demonstrate responsible communication, documentation, teamwork and patient-safety awareness in academic and clinical contexts. |

| **Learning Outcomes** | |
|---|---|
| Knowledge | Describe the principles and methodology of surgical examination and explain the pathophysiological mechanisms underlying common surgical conditions. |
| Skills | Perform surgical clinical examination and identify signs of acute surgical pathology such as acute abdomen, trauma or hemorrhage. |
| Responsabilities/ Autonomy | Evaluate surgical patients responsibly and communicate clinical findings within the healthcare team under supervision. |

| **Course Syllabus** | **Hours** |
|---|---|
| **Course #1 – Introduction to Surgical Semiology**<br>Overview of surgery's role in medical practice, blending knowledge, clinical decision-making, manual skills, and compassion. Brief history of surgical development. | 2 |

| Course Syllabus | Hours |
|---|---|
| **Course #2 – Asepsis, Antisepsis, and Sterilization**<br>Fundamentals of infection prevention in surgery. Introduction to surgical instrumentation and its basic uses. | 2 |
| **Course #3 – General Surgical Infections – Part I**<br>Acute infections of the skin: erysipelas, folliculitis, furuncle, and hydrosadenitis. Localized infections including abscesses, phlegmon, lymphangitis, and adenitis. Pyogenic infections of the hands and fingers. | 2 |
| **Course #4 – Surgical Infections – Part II (Special Infections)**<br>Discussion of gas gangrene, anthrax, tetanus, and systemic infections like septicemia. Chronic infections such as cold abscess, mycoses, tenosynovitis, and osteomyelitis. Introduction to antibiotic therapy. | 2 |
| **Course #5 – Surgical Shock**<br>Types of shock: hypovolemic, cardiogenic, distributive. Pathophysiology, clinical presentation, diagnostic approach, and treatment strategies. | 2 |
| **Course #6 – Wounds and Healing**<br>Classification and evolution of wounds, burns, and frostbite. Principles of surgical wound healing, including normal vs. pathological scarring and the importance of suture materials. | 2 |
| **Course #7 – Traumatic Injuries**<br>Craniocerebral, thoracic, abdominal, and limb trauma. Clinical evaluation and management of polytrauma cases. | 2 |
| **Course #8 – Malignant Tumors – General Concepts**<br>Definition, epidemiology, and etiopathogenesis of cancer. Key concepts in carcinogenesis, metastasis, classification, staging, and distinction from benign tumors. Diagnostic and therapeutic principles in oncology. | 2 |
| **Course #9 – Semiology of the Thyroid Gland**<br>Evaluation of thyroid pathologies including hyperthyroidism, thyroiditis, and thyroid cancer. Diagnostic and clinical signs. | 2 |
| **Course #10 – Semiology of the Mammary Gland**<br>Inflammatory and dystrophic conditions of the breast. Clinical approach to benign and malignant tumors of the mammary gland. | 2 |
| **Course #11 – Semiology of the Esophagus**<br>Functional and structural esophageal disorders including motility disturbances, diverticula, hiatal hernias, gastroesophageal reflux, and esophageal cancer. | 2 |
| **Course #12 – Semiology of the Stomach and Duodenum**<br>Functional and pathological conditions: gastropathies, diverticula, gastric dilation, volvulus, ulcers, tumors (benign and malignant), and Zollinger-Ellison syndrome. General approach to upper digestive hemorrhages. | 2 |
| **Course #13 – Semiology of the Small Intestine – Part I**<br>Inflammatory and infectious disorders: regional enteritis, tuberculosis, Crohn's disease, necrotizing enteritis, and mesenteric infarction. | 2 |
| **Course #14 – Semiology of the Small Intestine – Part II**<br>Intestinal obstruction (invagination, incarceration, strangulation) and tumors of the small intestine. Diagnostic approach and clinical signs. | 2 |

| Laboratory Syllabus | Hours |
|---|---|
| **Laboratory Work #1 – Observation Sheet and Surgical Patient Examination**<br>Practical training in completing the surgical observation sheet. Systematic approach to clinical examination of surgical patients. | 5 |

| Laboratory Syllabus | Hours |
|---|---|
| **Laboratory Work #2 – Asepsis, Antisepsis, and Sterilization Techniques**<br>Hands-on demonstration of sterilization procedures. Implementation of aseptic and antiseptic protocols in surgical settings. | 5 |
| **Laboratory Work #3 – Dressings and Bandaging Techniques**<br>Application of various dressings and bandages. Introduction to procedures such as enemas, washes, and medical poultices. | 5 |
| **Laboratory Work #4 – Puncture Techniques and Sample Collection**<br>Demonstration of aspiration puncture, biopsy puncture, paracentesis, and thoracocentesis. Protocols for collecting biological samples for microbiological analysis. | 5 |
| **Laboratory Work #5 – Hemorrhage Control and Patient Monitoring**<br>Techniques for temporary hemostasis. Procedures for initiating blood transfusion. Monitoring of vital signs and key parameters: blood pressure, heart rate, diuresis, stool, weight, temperature, and body hair changes. | 5 |
| **Laboratory Work #6 – Acute Surgical Infections**<br>Clinical features and management of conditions such as cellulitis, panaritium, phlegmon, bacterial and gas gangrene, necrotizing fasciitis, arterial and venous ulcers, tetanus, septicemia, and septicopyemia. | 5 |
| **Laboratory Work #7 – Clinical Case – Thyroid Gland Disorders**<br>Evaluation of dystrophic, inflammatory, and neoplastic thyroid lesions. Interpretation of semiological signs and related laboratory values. | 5 |
| **Laboratory Work #8 – Clinical Case – Mammary Gland Disorders**<br>Assessment of breast pathologies including inflammatory, dystrophic, and tumor lesions. Clinical signs and relevant biological markers. | 5 |
| **Laboratory Work #9 – Clinical Case – Abdominal Wall Conditions**<br>Clinical and laboratory evaluation of abdominal wall disorders. Focus on hernias, inflammation, and post-surgical complications. | 5 |
| **Laboratory Work #10 – Clinical Case – Esophageal Diseases**<br>Semiological and biological assessment of patients with esophageal disorders such as reflux, motility issues, and tumors. | 5 |
| **Laboratory Work #11 – Clinical Case – Gastro-Duodenal Ulcerative Disease**<br>Diagnosis and clinical examination of patients with gastric and duodenal ulcers. Associated signs and lab test interpretation. | 5 |
| **Laboratory Work #12 – Clinical Case – Small and Large Intestine Disorders**<br>Evaluation of small intestine and colonic conditions. Focus on semiological signs, inflammatory and neoplastic lesions, and relevant diagnostic tests. | 5 |
| **Laboratory Work #13 – Clinical Case – Rectal and Anal Canal Disorders**<br>Examination of patients with rectal and anal pathology. Interpretation of signs and symptoms, biological values, and practical demonstration of anorectal examination. | 5 |
| **Laboratory Work #14 – Clinical Case – Acute Appendicitis and Genital Examination**<br>Diagnosis and evaluation of acute appendicitis. Clinical demonstration of genital examination and recognition of associated pathologies | 5 |

**Minimum References:**


1. Bailey H, Love R, Bulstrode CJK, O'Connell PR, McCaskie AW. **Bailey & Love's short practice of surgery**. 27th ed. Boca Raton (FL): CRC Press; 2023.
2. Talley NJ, O'Connor S. **Clinical examination: a systematic guide to physical diagnosis**. 8th ed. Chatswood (NSW): Elsevier; 2020.

| **Minimum References:** |
|---|
| **3.** Williams NS, O'Connell PR, McCaskie AW, editors. **Bailey & Love's essential clinical anatomy**. 2nd ed. Boca Raton (FL): CRC Press; 2020. |
| **4.** Dehn TCB, Aspinall R. **Browse's introduction to the symptoms and signs of surgical disease**. 5th ed. Boca Raton (FL): CRC Press; 2014. |
| **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 | • Interactive learning based on logical and progressive presentation of content.<br>• Multimedia projection of lecture materials. |
| 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:** |
|---|
| - |

| **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:** |
|---|
| • 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 throught the semester | 15 % |
| - Projects / Translations / Posters / Essays, etc. | 15 % |
| - Other activities: | 0 % |

**Description of the actual methods of examination – E**

- Multiple choice examination

| **Minimal requirements for grade 5 (or how grade 5 is awarded)** | **Requirements for grade 10 (or how grade 10 is awarded)** |
|---|---|
| • According to the correction scale<br>• At least half of the topics must be correct | • According to the correction scale<br>• At least 90% correct topics |

**Date of completion**
**12.09.2025**

**Discipline Coordinator,**
**Assoc.Prof. Moldovan Alec Cosmin**

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

**Course Coordinator,**
**Assoc.Prof. Moldovan Alec Cosmin**

**Laboratory Coordinator,**
**Assoc.Prof. Moldovan Alec Cosmin**

**Department Approval Date**
**25.09.2025**

**TITU MAIORESCU UNIVERSITY OF BUCHAREST**
**FACULTY OF MEDICINE**
**MEDICINE IN ENGLISH PROGRAM**
**ACADEMIC YEAR: 2025-2026**

# DISCIPLINE FILE

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

| | | | | | | |
|---|---|---|---|---|---|---|
| Discipline`s Name | **ANATOMICAL PATHOLOGY (I)** | | | | | |
| Didactic position, name and surname of the **Discipline Coordinator** | Lect. Pechianu Cătălin, MD, PhD | | | | | |
| Didactic position, name and surname for the **Course Coordinator** | Lect. Pechianu Cătălin, MD, PhD | | | | | |
| Didactic position, name and surname for the **Coordinator** of the **Seminar / Laboratory / Clinical Traineeship** | Lect. Pechianu Cătălin<br>Assist. Iorgescu Andreea<br>Assist. Stoica-Mustafa Elena | | | | | |
| Discipline Code | **MLE.3.5.3** | Formative category of the discipline | | **FS** | | |
| Year of Study | **III** | Semester | **5** | Type of the final evaluation (**E, V**) | | **E5** |
| Discipline Regime (**M**-**m**andatory, **E**-**e**lective) | | | | **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 |
| 6. Homework, translations, etc. | 1 |

| Distribution of time pool per week | Hours |
|---|---|
| 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 | ANATOMICAL PATHOLOGY (I) |
|---|---|
| **Specific professional competencies** | C1 – Understanding structural changes in disease; C2 – Correlation of pathological findings with clinical diagnosis. |
| **Transversal competencies** | C4 – Scientific reasoning and analytical thinking; C6 – Responsible handling of medical data. |
| **General objectives of the discipline** | To provide fundamental knowledge regarding the core scope of Anatomical Pathology (I).<br>To develop understanding of clinical assessment and diagnostic reasoning relevant to Anatomical Pathology (I).<br>To familiarize students with evidence-based principles, practical applications and patient-safety considerations in Anatomical Pathology (I).<br>To establish a foundation for supervised clinical practice, academic reasoning and interdisciplinary collaboration in Anatomical Pathology (I). |
| **Specific objectives of the discipline** | Identify common concepts, clinical presentations or practical situations addressed in Anatomical Pathology (I).<br>Explain key mechanisms, diagnostic principles and professional standards relevant to Anatomical Pathology (I).<br>Interpret essential clinical, laboratory, imaging, histopathological, epidemiological or technological data when applicable.<br>Apply discipline-specific reasoning to formulate appropriate diagnostic, therapeutic, preventive or procedural approaches under supervision.<br>Demonstrate responsible communication, documentation, teamwork and patient-safety awareness in academic and clinical contexts. |

| Learning Outcomes | |
|---|---|
| Knowledge | Describe morphological alterations associated with inflammation, degeneration, necrosis and tissue repair processes. |
| Skills | Identify histopathological changes in tissues and correlate microscopic findings with clinical manifestations of disease. |
| Responsabilities/ Autonomy | Interpret pathological data responsibly while respecting laboratory safety and ethical standards. |

| Course Syllabus | Hours |
|---|---|
| **Course #1 – Introduction to Pathological Anatomy**<br>Definition and scope of pathological anatomy. Methods of study. Morphofunctional concepts related to lesions and diseases. Classification of pathological processes. | 2 |

| Course Syllabus | Hours |
|---|---|
| **Course #2 – Circulatory Disorders – Part I**<br>Active hyperemia and blood stasis. Ischemia and anoxia. Thrombosis: causes, types, and consequences. Disseminated intravascular coagulation. Embolism: causes, forms, and evolution. Infarctions: white and red types. | 2 |
| **Course #3 – Circulatory Disorders – Part II**<br>Hemorrhages. Disorders of lymphatic circulation including lymphostasis and lymphorrhagia. Morphopathology of irreversible shock. | 2 |
| **Course #4 – Dystrophic Disorders – Part I**<br>Overview of dystrophic cellular processes and alterations in extracellular structures. Cellular degeneration: reversible vs. irreversible. Protein dystrophies and general metabolic disruptions. | 2 |
| **Course #5 – Dystrophic Disorders – Part II**<br>Exogenous pigments. Fatty dystrophies: steatosis and dyslipidosis. Carbohydrate dystrophies: hereditary and acquired. Mineral dystrophies. Atrophy and hypertrophy. Necrobiosis and necrosis: coagulation, liquefaction, septic and aseptic gangrene. | 2 |
| **Course #6 – Inflammation – Part I**<br>Fundamentals of inflammation. Clinical and anatomical classifications. Exudative inflammation types: catarrhal, serous, serofibrinous, pseudomembranous, purulent, and hemorrhagic. | 2 |
| **Course #7 – Inflammation – Part II**<br>Proliferative inflammation: diffuse and circumscribed types (granulomas, foreign body granulomas, lipogranulomas). Granulation tissue, parenchymatous and necrotic inflammation. | 2 |
| **Course #8 – Inflammation – Part III**<br>Healing mechanisms in inflammation. Characteristics of inflammation based on cause and progression. Acute, subacute, and chronic inflammation. Influence of antibiotics and therapies on inflammatory changes. Specific inflammations. | 2 |
| **Course #9 – Inflammation – Part IV**<br>Morphopathology of tuberculosis: macroscopic and microscopic lesions, stages, dissemination patterns. Syphilis: morphological features of each stage (primary, secondary, tertiary), and congenital forms. | 2 |
| **Course #10 – Inflammation – Part V**<br>Mycotic and parasitic inflammatory processes. Immune-mediated inflammation and morphopathological aspects in organ transplantation.. | 2 |
| **Course #11 – Tumors – Part I**<br>Neoplastic cell characteristics. Etiopathogenesis and biological behavior of tumors. General classification. Morphological features of benign and malignant tumors. | 2 |
| **Course #12 – Tumors – Part II**<br>Types of tumors: epithelial and connective (benign and malignant), disembryoplastic tumors. Concepts of histopathological grading and staging. Anatomopathological methods in tumor diagnosis. | 2 |
| **Course #13 – Regeneration and Organization**<br>Mechanisms of tissue repair including regeneration and scar formation. Organization processes post-injury and inflammation. | 2 |
| **Course #14 – Malformations**<br>Etiology and morphogenesis of congenital malformations. Teratogenic factors: exogenous and endogenous. Varieties and classification of developmental anomalies. | 2 |

| Laboratory Syllabus | Hours |
|---|---|
| **Laboratory Work #1 – Diagnostic Techniques in Morphopathology** | 2 |

| Laboratory Syllabus | Hours |
|---|---|
| Overview of histopathological and cytological methods used in clinical practice. Circuits and protocols for routine and special investigations. Techniques: exfoliative cytology, fine-needle aspiration cytology (FNAC), intraoperative biopsy, paraffin-embedded histology, and special staining methods. | |
| **Laboratory Work #2 – Macroscopy: Introduction to Necropsy**<br>Introduction to autopsy procedures. Drafting and structuring the necropsy protocol. Step-by-step presentation of a complete necropsy. | 2 |
| **Laboratory Work #3 – Dressings and Bandaging Techniques**<br>Histological examination of: renal hyperemia, chronic pulmonary stasis, thrombus, renal infarction, myocardial infarction, and pulmonary infarction. | 2 |
| **Laboratory Work #4 – Macroscopy – Circulatory Lesions**<br>Observation of gross pathological changes due to circulatory disorders on cadavers and anatomical specimens. | 2 |
| **Laboratory Work #5 – Microscopy – Dystrophic Lesions**<br>Histopathological analysis of: vacuolar dystrophy, ovarian hyalinization, renal amyloidosis, fibrillar degeneration, hepatic cholestasis, and hepatic steatosis. | 2 |
| **Laboratory Work #6 – Macroscopy – Dystrophic Changes**<br>Gross pathological evaluation of dystrophic lesions observed on cadavers and anatomical specimens. | 2 |
| **Laboratory Work #7 – Microscopy – Inflammatory Lesions (Part I)**<br>Examination of slides showing: meningitis, liver abscess, appendicitis, fibrinous pleurisy, epidemic hepatitis, and ulceronecrotic enteritis. | 2 |
| **Laboratory Work #8 – Macroscopy – Inflammatory Lesions (Part I)**<br>Macroscopic identification of inflammatory lesions in cadaveric specimens and isolated organ samples. | 2 |
| **Laboratory Work #9 – Microscopy – Inflammatory Lesions (Part II)**<br>Study of histological slides depicting: rheumatic myocarditis, pulmonary tuberculosis, granulation tissue, tuberculous lymphadenitis, cytomegalovirus inclusions, and mycotic enteritis. | 2 |
| **Laboratory Work #10 – Macroscopy – Inflammatory Lesions (Part II)**<br>Further gross analysis of inflammatory processes seen in cadavers and affected organs. | 2 |
| **Laboratory Work #11 – Microscopy – Benign Tumors**<br>Histological features of: skin papilloma, breast fibroadenoma, intraductal papilloma, rectal polyp, cutaneous hemangioma, uterine leiomyoma, and mixed parotid tumor. | 2 |
| **Laboratory Work #12 – Macroscopy – Benign Tumors**<br>Visual and tactile examination of benign tumor specimens from surgical or autopsy material. | 2 |
| **Laboratory Work #13 – Microscopy – Malignant Tumors**<br>Histological diagnosis of: basal cell carcinoma, squamous cell carcinoma, adenocarcinoma and its metastases, fibrosarcoma, and osteosarcoma. | 2 |
| **Laboratory Work #14 – Macroscopy – Malignant Tumors**<br>Gross morphological assessment of malignant tumors from autopsies and surgical specimens. Recognition of key characteristics and staging features. | 2 |

**Minimum References:**


1. Kumar V, Abbas AK, Aster JC. **Robbins and Cotran pathologic basis of disease**. 10th ed. Philadelphia: Elsevier; 2020.

| Minimum References: |
|---|
| **2.** Kumar V, Abbas AK, Aster JC. **Robbins basic pathology**. 10th ed. Philadelphia: Elsevier; 2018. |
| **3.** Rosai J, Ackerman LV, editors. **Rosai and Ackerman's surgical pathology**. 11th ed. Philadelphia: Elsevier; 2018. |
| **4.** WHO Classification of Tumours Editorial Board. **WHO classification of tumours**. 5th ed. Lyon: International Agency for Research on Cancer; 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 | • Interactive learning based on logical and progressive presentation of content.<br>• Multimedia projection of lecture materials. |
| 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: |
|---|
| - |

| 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: |
|---|
| • 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 throught the semester | 15 % |
| - Projects / Translations / Posters / Essays, etc. | 15 % |
| - Other activities: | 0 % |

**Description of the actual methods of examination – E**

- Multiple choice examination

| Minimal requirements for grade 5 (or how grade 5 is awarded) | Requirements for grade 10 (or how grade 10 is awarded) |
|---|---|
| • According to the correction scale | • According to the correction scale |

| | |
|---|---|
| • At least half of the topics must be correct | • At least 90% correct topics |

**Date of completion**
**15.09.2025**

**Discipline Coordinator,**
**Lect. Pechianu Cătălin**

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

**Course Coordinator,**
**Lect. Pechianu Cătălin**

**Laboratory Coordinator,**
**Lect. Pechianu Cătălin**
**Assist. Iorgescu Andreea**
**Assist. Stoica-Mustafa Elena**

**Department Approval Date**
**25.09.2025**

**TITU MAIORESCU UNIVERSITY OF BUCHAREST**
**FACULTY OF MEDICINE**
**MEDICINE IN ENGLISH PROGRAM**
**ACADEMIC YEAR: 2025-2026**

# DISCIPLINE FILE

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

| | | | | | | |
|---|---|---|---|---|---|---|
| Discipline`s Name | **PATHOPHYSIOLOGY (I)** | | | | | |
| Didactic position, name and surname of the **Discipline Coordinator** | **Prof. Nemeș Roxana Maria** | | | | | |
| Didactic position, name and surname for the **Course Coordinator** | **Prof. Nemeș Roxana Maria** | | | | | |
| Didactic position, name and surname for the **Coordinator** of the **Seminar / Laboratory / Clinical Traineeship** | **Prof. Nemeș Roxana Maria** | | | | | |
| Discipline Code | **MLE.3.5.4** | Formative category of the discipline | | **FS** | | |
| Year of Study | **III** | Semester | **5** | Type of the final evaluation (**E, V**) | | **E5** |
| Discipline Regime (**M**-**m**andatory, **E**-**e**lective) | | | | **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 |
| 6. Homework, translations, etc. | 1 |

| Distribution of time pool per week | Hours |
|---|---|
| 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 | PATHOPHYSIOLOGY (I) |
|---|---|
| **Specific professional competencies** | C1 – Understanding disease mechanisms; C2 – Application of pathophysiological principles in clinical reasoning. |
| **Transversal competencies** | C4 – Critical thinking and problem solving; C6 – Professional responsibility. |
| **General objectives of the discipline** | To provide fundamental knowledge regarding the core scope of Pathophysiology (I).<br>To develop understanding of clinical assessment and diagnostic reasoning relevant to Pathophysiology (I).<br>To familiarize students with evidence-based principles, practical applications and patient-safety considerations in Pathophysiology (I).<br>To establish a foundation for supervised clinical practice, academic reasoning and interdisciplinary collaboration in Pathophysiology (I). |
| **Specific objectives of the discipline** | Identify common concepts, clinical presentations or practical situations addressed in Pathophysiology (I).<br>Explain key mechanisms, diagnostic principles and professional standards relevant to Pathophysiology (I).<br>Interpret essential clinical, laboratory, imaging, histopathological, epidemiological or technological data when applicable.<br>Apply discipline-specific reasoning to formulate appropriate diagnostic, therapeutic, preventive or procedural approaches under supervision.<br>Demonstrate responsible communication, documentation, teamwork and patient-safety awareness in academic and clinical contexts. |

| Learning Outcomes | |
|---|---|
| Knowledge | Explain mechanisms responsible for the development of disease and alterations of physiological processes. |
| Skills | Analyze pathophysiological mechanisms underlying clinical manifestations and interpret laboratory data accordingly. |
| Responsabilities/ Autonomy | Integrate theoretical knowledge into clinical reasoning and assume responsibility for scientific interpretation of disease mechanisms. |

| Course Syllabus | Hours |
|---|---|
| **Course #1 – Non-Specific and Specific Defense Mechanisms**<br>Overview of the body's innate and adaptive defense systems. Mechanisms of immune surveillance and response to pathogens. | 2 |

| Course Syllabus | Hours |
|---|---|
| **Course #2 – Immune Response Physiology**<br>In-depth study of immune system activation, regulation, and the roles of humoral and cellular components. | 2 |
| **Course #3 – Pathophysiology of Erythrocyte Disorders**<br>Disorders affecting red blood cells: anemias, polycythemia, and other abnormalities in erythropoiesis and erythrocyte function. | 2 |
| **Course #4 – Pathophysiology of Leukocyte Disorders**<br>Conditions of the leukocyte series including leukocytosis, leukopenia, and qualitative abnormalities of white blood cells.. | 2 |
| **Course #5 – Hemostasis Disorders**<br>Physiological and pathological processes involved in blood clotting. Exploration of bleeding disorders and thrombotic conditions. | 2 |
| **Course #6 – Thermoregulation**<br>Mechanisms of body temperature control. Pathophysiological changes in hypothermia, hyperthermia, and fever. | 2 |
| **Course #7 – Carbohydrate Metabolism Disorders**<br>Physiology and pathophysiology of glucose metabolism. Focus on diabetes mellitus, insulin resistance, and hypoglycemia. | 2 |
| **Course #8 – Lipid Metabolism Disorders**<br>Pathological changes in lipid metabolism: hyperlipidemia, lipidosis, and disorders associated with cholesterol and triglycerides. | 2 |
| **Course #9 – Protein Metabolism Imbalances**<br>Disruptions in protein synthesis and degradation. Focus on hypo- and hyperproteinemia and amino acid metabolism disorders. | 2 |
| **Course #10 – Acid-Base Balance Disorders**<br>Physiological regulation of pH and disturbances such as acidosis and alkalosis. Respiratory and metabolic origins and compensatory mechanisms. | 2 |
| **Course #11 – Hydro-Electrolytic and Phospho-Calcic Balance**<br>Pathophysiology of water and electrolyte disturbances. Calcium and phosphate metabolism in health and disease. | 2 |
| **Course #12 – Physiology of Pain**<br>Mechanisms and types of pain. Pathophysiological changes in nociception and chronic pain syndromes. | 2 |
| **Course #13 – Stress Response Physiology**<br>The body's adaptive response to physical and psychological stress. Endocrine, nervous, and metabolic involvement. | 2 |
| **Course #14 – Seminar Session**<br>Integration of theoretical knowledge through case discussions, reviews, and clinical applications. | 2 |

| Laboratory Syllabus | Hours |
|---|---|
| **Laboratory Work #1 – Exploration of Blood Tissue – General Overview**<br>Introduction to the investigative methods used in blood analysis. Overview of laboratory techniques and interpretation. | 2 |
| **Laboratory Work #2 – Anemic Syndrome**<br>Diagnostic approach to various types of anemia. Morphological and biochemical indicators used in anemia classification. | 2 |

| Laboratory Syllabus | Hours |
|---|---|
| **Laboratory Work #3 – Leukocyte Series Analysis**<br>Examination and interpretation of white blood cell counts and differentials. Assessment of leukocytosis, leukopenia, and functional anomalies. | 2 |
| **Laboratory Work #4 – Megakaryocyte-Thrombocytic Series**<br>Evaluation of platelet production and function. Exploration of thrombocytopenia, thrombocytosis, and related disorders. | 2 |
| **Laboratory Work #5 – Primary and Secondary Hemostasis**<br>Assessment of vascular and platelet function, coagulation pathways, and factors influencing bleeding and clot formation. | 2 |
| **Laboratory Work #6 – Coagulation and Fibrinolysis Testing**<br>Practical applications of clotting tests: plasma fibrinogen levels, clot retraction, and fibrinolytic activity evaluation. | 2 |
| **Laboratory Work #7 – Functional Exploration of Carbohydrate Metabolism**<br>Tests and interpretation in glucose metabolism: glycemia, glucose tolerance, insulin sensitivity, and related parameters. | 2 |
| **Laboratory Work #8 – Functional Exploration of Lipid Metabolism**<br>Laboratory assessment of lipid profile: cholesterol, triglycerides, lipoprotein levels, and indicators of dyslipidemia. | 2 |
| **Laboratory Work #9 – Functional Exploration of Protein Metabolism**<br>Evaluation of serum proteins, proteinuria, nitrogen balance, and disturbances in protein synthesis and degradation. | 2 |
| **Laboratory Work #10 – Volemia and Water Balance**<br>Determination of blood volume and its variations. Clinical interpretation of dehydration, hypervolemia, and water distribution. | 2 |
| **Laboratory Work #11 – Electrolyte Metabolism**<br>Measurement and analysis of sodium, potassium, chloride, calcium, and phosphate levels. Understanding electrolyte imbalances. | 2 |
| **Laboratory Work #12 – Functional Exploration of Acid-Base Balance**<br>Assessment of acid-base status using blood gas analysis. Identification and interpretation of acidosis and alkalosis. | 2 |
| **Laboratory Work #13 – Functional Exploration of the Nervous System**<br>Clinical tools for evaluating nervous system function. Integration of neurophysiological tests and symptomatology. | 2 |
| **Laboratory Work #14 – Practical Colloquium**<br>Review and examination of key practical topics covered throughout the semester. | 2 |

**Minimum References:**


1. McCance KL, Huether SE, Brashers VL, Rote NS. **Pathophysiology: the biologic basis for disease in adults and children**. 10th ed. St. Louis (MO): Elsevier; 2023.
2. Copstead-Kirkhorn LC, Banasik JL. **Pathophysiology**. 6th ed. St. Louis (MO): Elsevier; 2020.
3. Hammer GD, McPhee SJ. **Pathophysiology of disease: an introduction to clinical medicine**. 9th ed. New York: McGraw-Hill Education; 2024.
4. Kumar V, Abbas AK, Aster JC. **Robbins and Cotran pathologic basis of disease**. 10th ed. Philadelphia: 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 | • Interactive learning based on logical and progressive presentation of content.<br>• Multimedia projection of lecture materials. |
| 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:** |
|---|
| - |

| **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:** |
|---|
| • 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 throught the semester | 15 % |
| - Projects / Translations / Posters / Essays, etc. | 15 % |
| - Other activities: | 0 % |

**Description of the actual methods of examination – E**

- Multiple choice examination

| **Minimal requirements for grade 5 (or how grade 5 is awarded)** | **Requirements for grade 10 (or how grade 10 is awarded)** |
|---|---|
| • According to the correction scale<br>• At least half of the topics must be correct | • According to the correction scale<br>• At least 90% correct topics |

**Date of completion**
**10.09.2025**

**Discipline Coordinator,**
**Prof. Nemeș Roxana Maria**

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

**Course Coordinator,**
**Prof. Nemeș Roxana Maria**

**Laboratory Coordinator,**
**Prof. Nemeș Roxana Maria**

**Department Approval Date**
**25.09.2025**

**TITU MAIORESCU UNIVERSITY OF BUCHAREST**
**FACULTY OF MEDICINE**
**MEDICINE IN ENGLISH PROGRAM**
**ACADEMIC YEAR: 2025-2026**

# DISCIPLINE FILE

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

| | | | | | | |
|---|---|---|---|---|---|---|
| Discipline`s Name | **PHARMACOLOGY** | | | | | |
| Didactic position, name and surname of the **Discipline Coordinator** | Assoc.prof. Seiman Corina | | | | | |
| Didactic position, name and surname for the **Course Coordinator** | Assoc.prof. Seiman Corina | | | | | |
| Didactic position, name and surname for the **Coordinator** of the **Seminar / Laboratory / Clinical Traineeship** | Assoc.prof. Seiman Corina<br>PhD.Dr. Alexiu-Toma Andrada | | | | | |
| Discipline Code | **MLE.3.5.5** | Formative category of the discipline | | **FS** | | |
| Year of Study | **III** | Semester | **5** | Type of the final evaluation (**E, V**) | | **E5** |
| Discipline Regime (**M**-**m**andatory, **E**-**e**lective) | | | | **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 |
| 6. Homework, translations, etc. | 1 |

| Distribution of time pool per week | Hours |
|---|---|
| 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 | PHARMACOLOGY |
|---|---|
| **Specific professional competencies** | C2 – Application of pharmacological principles in therapy; C4 – Interpretation of pharmacological data. |
| **Transversal competencies** | C6 – Ethical medical decision-making; C5 – Communication regarding treatment. |
| **General objectives of the discipline** | To provide fundamental knowledge regarding the core scope of Pharmacology.<br>To develop understanding of clinical assessment and diagnostic reasoning relevant to Pharmacology.<br>To familiarize students with evidence-based principles, practical applications and patient-safety considerations in Pharmacology.<br>To establish a foundation for supervised clinical practice, academic reasoning and interdisciplinary collaboration in Pharmacology. |
| **Specific objectives of the discipline** | Identify common concepts, clinical presentations or practical situations addressed in Pharmacology.<br>Explain key mechanisms, diagnostic principles and professional standards relevant to Pharmacology.<br>Interpret essential clinical, laboratory, imaging, histopathological, epidemiological or technological data when applicable.<br>Apply discipline-specific reasoning to formulate appropriate diagnostic, therapeutic, preventive or procedural approaches under supervision.<br>Demonstrate responsible communication, documentation, teamwork and patient-safety awareness in academic and clinical contexts. |

| Learning Outcomes | |
|---|---|
| Knowledge | Describe pharmacokinetics, pharmacodynamics and mechanisms of action of major drug classes. |
| Skills | Apply principles of rational pharmacotherapy and identify potential drug interactions and adverse effects. |
| Responsabilities/ Autonomy | Use pharmacological knowledge responsibly to ensure safe medication practices and patient safety. |

| Course Syllabus | Hours |
|---|---|
| **Course #1 – Introduction to Pharmacology and Pharmacokinetics**<br>Overview of pharmacology as a discipline. Fundamental concepts of pharmacokinetics: absorption, distribution, biotransformation, and elimination of treatments. | 2 |

| Course Syllabus | Hours |
|---|---|
| **Course #2 – Pharmacokinetic Parameters**<br>Key parameters such as bioavailability, half-life, clearance, and volume of distribution and their impact on treatment efficacy and safety. | 2 |
| **Course #3 – General Pharmacodynamics**<br>Mechanisms of action of medical treatments. Interaction with biological targets, dose-response relationships, and therapeutic index. | 2 |
| **Course #4 – Basics of Pharmacotoxicology**<br>Introduction to treatment-related toxicity. Types of adverse effects, overdose scenarios, and principles of toxicological evaluation. | 2 |
| **Course #5 – Vegetative Nervous System – Introduction**<br>Structure and function of the autonomic nervous system. Overview of treatments targeting this system. Introduction to cholinergic medications. | 2 |
| **Course #6 – Cholinergic Medications – Part I**<br>Classification, mechanisms of action, and clinical applications of cholinergic treatments: agonists and antagonists. | 2 |
| **Course #7 – Cholinergic Medications – Part II & Sympathomimetic Medications – Part I**<br>Continuation of cholinergic treatment overview. Introduction to sympathomimetic medications, their selectivity, and physiological effects. | 2 |
| **Course #8 – Sympathomimetic Medications – Part II & Sympatholytic Medications**<br>Therapeutic overview of sympatholytic medications, including alpha- and beta-receptor blockers, with clinical indications and considerations. | 2 |
| **Course #9 – Cardiovascular Treatments – Overview**<br>General introduction to medications used in treating heart failure, arrhythmias, angina, hypertension, and disorders of coagulation. | 2 |
| **Course #10 – Antianginal Treatments**<br>Therapeutic options for angina pectoris including nitrates, beta-blockers, and calcium channel modulators. | 2 |
| **Course #11 – Antiarrhythmic Treatments**<br>Classes of antiarrhythmic medications, their modes of action, therapeutic use, and potential effects. | 2 |
| **Course #12 – Antihypertensive Treatments**<br>Overview of treatments used to manage high blood pressure: ACE inhibitors, angiotensin receptor blockers, diuretics, beta-blockers, and calcium antagonists. | 2 |
| **Course #13 – Treatments Affecting Hemostasis**<br>Medications involved in preventing or promoting clot formation: anticoagulants, antiplatelet agents, thrombolytics, and hemostatics. | 2 |
| **Course #14 – Treatments for Respiratory and Digestive Systems**<br>Medications used in respiratory conditions: antitussives, expectorants, antiasthmatics. Treatments for digestive issues: antiulcers, laxatives, antidiarrheals, purgatives, and digestive enzyme therapy. | 2 |

| Laboratory Syllabus | Hours |
|---|---|
| **Laboratory Work #1 – Introduction to Medical Substances**<br>Definitions of medication, active substance, and pharmaceutical product. Understanding medicinal nomenclature. Introduction to experimental and clinical research in pharmacology. | 2 |
| **Laboratory Work #2 – Pharmacopoeia and Regulatory Aspects**<br>Overview of national and international pharmacopoeias. Legislation governing medicinal products and the procedures for their authorization and approval. | 2 |

| Laboratory Syllabus | Hours |
|---|---|
| **Laboratory Work #3 – Solid and Semisolid Medicinal Forms**<br>Presentation of pharmaceutical forms such as tablets, capsules, powders, ointments, and creams. Their preparation, storage, and administration routes. | 2 |
| **Laboratory Work #4 – Liquid and Gaseous Medicinal Forms**<br>Syrups, solutions, suspensions, aerosols, and inhalants. Clinical indications and correct methods of administration. | 2 |
| **Laboratory Work #5 – Medical Prescriptions**<br>Structure of a medical prescription: components, terminology, and legal requirements. Guidelines for prescribing both standard and compounded preparations. | 2 |
| **Laboratory Work #6 – Administration Guidelines**<br>Examples of prescriptions. Best practices for timing and conditions of administration to optimize treatment effectiveness and reduce adverse effects. | 2 |
| **Laboratory Work #7 – Pharmacological Research Methods**<br>Introduction to preclinical and clinical research. Common experimental models used in the development and testing of new medications. | 2 |
| **Laboratory Work #8 – Vegetative Nervous System – Part I**<br>Prescription examples and therapeutic use of sympathomimetic and sympatholytic medications. Clinical indications and effects. | 2 |
| **Laboratory Work #9 – Vegetative Nervous System – Part II**<br>Prescription and application of parasympathomimetic and parasympatholytic medications. Practical considerations in therapeutic contexts. | 2 |
| **Laboratory Work #10 – Cardiovascular System – Prescribing Practice I**<br>Therapeutic selection and prescription of medications for heart failure and angina. Review of clinical cases and patient-specific considerations. | 2 |
| **Laboratory Work #11 – Cardiovascular System – Prescribing Practice II**<br>Focus on antihypertensive medications. Writing and interpreting prescriptions with attention to pharmacological compatibility and patient profiles. | 2 |
| **Laboratory Work #12 – Cardiovascular System – Prescribing Practice III**<br>Therapies related to blood clotting: antithrombotics and hemostatics. Safe prescribing and monitoring protocols. | 2 |
| **Laboratory Work #13 – Respiratory and Digestive Systems – Prescribing Practice**<br>Prescriptions for respiratory treatments (antitussives, expectorants, antiasthmatics) and digestive medications (antiulcers, laxatives, purgatives, digestive enzymes). | 2 |
| **Laboratory Work #14 – Practical Examination**<br>Assessment of practical knowledge and skills in prescription writing, dosage form selection, and clinical application of pharmacological treatments. | 2 |

**Minimum References:**


1. Katzung BG, Trevor AJ. **Basic and clinical pharmacology**. 15th ed. New York: McGraw-Hill Education; 2021.
2. Rang HP, Ritter JM, Flower RJ, Henderson G. **Rang and Dale's pharmacology**. 9th ed. Edinburgh: Elsevier; 2020.
3. Brunton LL, Hilal-Dandan R, Knollmann BC, editors. **Goodman & Gilman's the pharmacological basis of therapeutics**. 13th ed. New York: McGraw-Hill Education; 2018.
4. Neal MJ. **Medical pharmacology at a glance**. 9th ed. Hoboken (NJ): Wiley-Blackwell; 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** |
|---|
| • |

| **How the information is transmitted** | |
|---|---|
| **Type of Activity** | **Teaching methods used** |
| Lecture | • Interactive learning based on logical and progressive presentation of content.<br>• Multimedia projection of lecture materials. |
| 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:** |
|---|
| - |

| **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:** |
|---|
| • 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 throught the semester | 15 % |
| - Projects / Translations / Posters / Essays, etc. | 15 % |
| - Other activities: | 0 % |

**Description of the actual methods of examination – E**

- Multiple choice examination

| **Minimal requirements for grade 5 (or how grade 5 is awarded)** | **Requirements for grade 10 (or how grade 10 is awarded)** |
|---|---|
| • According to the correction scale<br>• At least half of the topics must be correct | • According to the correction scale<br>• At least 90% correct topics |

**Date of completion**
**12.09.2025**

**Discipline Coordinator,**
**Assoc.prof. Seiman Corina**

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

**Course Coordinator,**
**Assoc.prof. Seiman Corina**

**Laboratory Coordinator,**
**Assoc.prof. Seiman Corina**
**PhD.Dr. Alexiu-Toma Andrada**

**Department Approval Date**
**25.09.2025**

**TITU MAIORESCU UNIVERSITY OF BUCHAREST**
**FACULTY OF MEDICINE**
**MEDICINE IN ENGLISH PROGRAM**
**ACADEMIC YEAR: 2025-2026**

# DISCIPLINE FILE

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

| | | | | | | |
|---|---|---|---|---|---|---|
| Discipline`s Name | **HYGIENE (I)** | | | | | |
| Didactic position, name and surname of the **Discipline Coordinator** | Prof. Mănăstireanu Dan | | | | | |
| Didactic position, name and surname for the **Course Coordinator** | Prof. Mănăstireanu Dan | | | | | |
| Didactic position, name and surname for the **Coordinator** of the **Seminar / Laboratory / Clinical Traineeship** | Prof. Mănăstireanu Dan | | | | | |
| Discipline Code | **MLE.3.5.6** | Formative category of the discipline | | **FS** | | |
| Year of Study | **III** | Semester | **5** | Type of the final evaluation (**E, V**) | | **E5** |
| Discipline Regime (**M**-**m**andatory, **E**-**e**lective) | | | | **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 |
| 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 | 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 | HYGIENE (I) |
|---|---|
| **Specific professional competencies** | C1 – Identification of health risk factors; C4 – Application of preventive medicine principles. |
| **Transversal competencies** | C5 – Communication in public health contexts; C6 – Social responsibility. |
| **General objectives of the discipline** | To provide fundamental knowledge regarding the core scope of Hygiene (I).<br>To develop understanding of clinical assessment and diagnostic reasoning relevant to Hygiene (I).<br>To familiarize students with evidence-based principles, practical applications and patient-safety considerations in Hygiene (I).<br>To establish a foundation for supervised clinical practice, academic reasoning and interdisciplinary collaboration in Hygiene (I). |
| **Specific objectives of the discipline** | Identify common concepts, clinical presentations or practical situations addressed in Hygiene (I).<br>Explain key mechanisms, diagnostic principles and professional standards relevant to Hygiene (I).<br>Interpret essential clinical, laboratory, imaging, histopathological, epidemiological or technological data when applicable.<br>Apply discipline-specific reasoning to formulate appropriate diagnostic, therapeutic, preventive or procedural approaches under supervision.<br>Demonstrate responsible communication, documentation, teamwork and patient-safety awareness in academic and clinical contexts. |

| Learning Outcomes | |
|---|---|
| Knowledge | Describe environmental and behavioral determinants of health and principles of disease prevention. |
| Skills | Identify environmental risk factors and apply preventive measures in healthcare and community settings. |
| Responsabilities/ Autonomy | Promote responsible health protection measures and contribute to health education activities. |

| Course Syllabus | Hours |
|---|---|
| **Course #1 – Introduction to Hygiene and Prophylaxis**<br>Foundations of hygiene as a medical science. Concepts of environmental hygiene, disease prevention, and public health prophylaxis. | 1 |

| Course Syllabus | Hours |
|---|---|
| **Course #2 – Air Hygiene**<br>Factors affecting air quality and its impact on health. Methods of monitoring and controlling air pollution in various environments. | 2 |
| **Course #3 – Water Hygiene and Waterborne Diseases**<br>Water as a public health factor. Hygiene of drinking water. Sources and prevention of waterborne diseases. Standards and quality control. | 2 |
| **Course #4 – Soil Hygiene and Health Implications**<br>Hygienic importance of soil in relation to health. Sources of contamination, sanitation methods, and prevention of disease transmission through soil. | 2 |
| **Course #5 – Radiation Hygiene and Medical Applications**<br>Types of radiation and their health effects. Principles of radiation protection. Use of radiation in diagnosis and treatment in medical settings. | 2 |
| **Course #6 – Habitat Hygiene and Microclimate**<br>Assessment of living environments, with focus on thermal comfort, humidity, ventilation, and light. Special aspects of hygiene for different age groups. | 2 |
| **Course #7 – Sanitary Hygiene**<br>Sanitary measures in public institutions, food services, and waste management. Prevention against communicable diseases through sanitation. | 2 |
| **Course #8 – Medical Legislation**<br>Overview of Romanian health legislation and its alignment with European Union standards in hygiene and environmental health. | 1 |

| Laboratory Syllabus | Hours |
|---|---|
| **Laboratory Work #1 – Laboratory Safety in Hygiene Practice**<br>Workplace protection measures and protocols in the hygiene laboratory. Proper use of equipment and personal protective gear. | 2 |
| **Laboratory Work #2 – Hygiene Research Methods**<br>Overview of specific methods used in hygiene analysis. Data collection, environmental sampling, and interpretation of hygiene indicators. | 2 |
| **Laboratory Work #3 – Water Potability Assessment**<br>Determination of bacteriological and chemical indicators of potable water. Standards of safety and practical testing procedures. | 2 |
| **Laboratory Work #4 – Evaluation of Pollutant Limits (CMA Values)**<br>Understanding CMA (Maximum Admissible Concentration) values for air, water, and soil. Assessment of the body's responses to various pollutants including irritants, asphyxiants, toxic and fibrogenic agents. | 2 |
| **Laboratory Work #5 – Air Pollution and Public Health**<br>Investigation of sources and types of air pollution. Impact of smoking and bacteriological contamination of indoor and outdoor air. | 2 |
| **Laboratory Work #6 – Radiation Use in Hygiene**<br>Practical applications and safety considerations for the use of radiation in hygiene and medicine. Protective measures and monitoring techniques. | 2 |
| **Laboratory Work #7 – Microclimate Analysis**<br>Assessment of microclimatic factors (temperature, humidity, ventilation, etc.) and their effect on comfort and productivity. Balancing health needs and economic efficiency in indoor environments. | 2 |

| Minimum References: |
|---|
| **1.** Friis RH. **Essentials of environmental health**. 3rd ed. Burlington (MA): Jones & Bartlett Learning; 2021. |
| **2.** World Health Organization. **Environmental health**. Geneva: World Health Organization; 2020. |
| **3.** Gordis L. **Epidemiology**. 6th ed. Philadelphia: Elsevier; 2020. |
| **4.** Stanhope M, Lancaster J. **Public health nursing: population-centered health care in the community**. 10th ed. St. Louis (MO): 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 | • Interactive learning based on logical and progressive presentation of content.<br>• Multimedia projection of lecture materials. |
| 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: |
|---|
| - |

| 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: |
|---|
| • 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 throught the semester | 15 % |
| - Projects / Translations / Posters / Essays, etc. | 15 % |
| - Other activities: | 0 % |

| Description of the actual methods of examination – E |
|---|
| • Multiple choice examination |

| Minimal requirements for grade 5<br>(or how grade 5 is awarded) | Requirements for grade 10<br>(or how grade 10 is awarded) |
|---|---|
| • According to the correction scale<br>• At least half of the topics must be correct | • According to the correction scale<br>• At least 90% correct topics |

**Date of completion**
**09.09.2025**

**Discipline Coordinator,**
**Prof. Mănăstireanu Dan**

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

**Course Coordinator,**
**Prof. Mănăstireanu Dan**

**Laboratory Coordinator,**
**Prof. Mănăstireanu Dan**

**Department Approval Date**
**25.09.2025**

**TITU MAIORESCU UNIVERSITY OF BUCHAREST**
**FACULTY OF MEDICINE**
**MEDICINE IN ENGLISH PROGRAM**
**ACADEMIC YEAR: 2025-2026**

# DISCIPLINE FILE

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

| | | | | | | |
|---|---|---|---|---|---|---|
| Discipline`s Name | **ALLERGOLOGY AND CLINICAL IMMUNOLOGY** | | | | | |
| Didactic position, name and surname of the **Discipline Coordinator** | Univ. Assist. Moiceanu-Șovărel Ana-Maria, MD, PhD | | | | | |
| Didactic position, name and surname for the **Course Coordinator** | Univ. Assist. Moiceanu-Șovărel Ana-Maria, MD, PhD | | | | | |
| Didactic position, name and surname for the **Coordinator** of the **Seminar / Laboratory / Clinical Traineeship** | Univ. Assist. Moiceanu-Șovărel Ana-Maria, MD, PhD | | | | | |
| Discipline Code | **MLE.3.5.7** | Formative category of the discipline | | **DS** | | |
| Year of Study | **III** | Semester | **5** | Type of the final evaluation (**E, V**) | | **E5** |
| Discipline Regime (**M**-**m**andatory, **E**-**e**lective) | | | | **M** | No. of credits | **2** |

| | | | | | |
|---|---|---|---|---|---|
| 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** | ALLERGOLOGY AND CLINICAL IMMUNOLOGY |
|---|---|
| **Specific professional competencies** | C1 – Recognition of allergic manifestations; C2 – Interpretation of immunological data. |
| **Transversal competencies** | C4 – Scientific reasoning; C5 – Interdisciplinary collaboration. |
| **General objectives of the discipline** | To provide fundamental knowledge regarding the core scope of Allergology and clinical immunology.<br>To develop understanding of clinical assessment and diagnostic reasoning relevant to Allergology and clinical immunology.<br>To familiarize students with evidence-based principles, practical applications and patient-safety considerations in Allergology and clinical immunology.<br>To establish a foundation for supervised clinical practice, academic reasoning and interdisciplinary collaboration in Allergology and clinical immunology. |
| **Specific objectives of the discipline** | Identify common concepts, clinical presentations or practical situations addressed in Allergology and clinical immunology.<br>Explain key mechanisms, diagnostic principles and professional standards relevant to Allergology and clinical immunology.<br>Interpret essential clinical, laboratory, imaging, histopathological, epidemiological or technological data when applicable.<br>Apply discipline-specific reasoning to formulate appropriate diagnostic, therapeutic, preventive or procedural approaches under supervision.<br>Demonstrate responsible communication, documentation, teamwork and patient-safety awareness in academic and clinical contexts. |

| **Learning Outcomes** | |
|---|---|
| Knowledge | Explain immune response mechanisms and the pathophysiology of allergic and autoimmune diseases. |
| Skills | Interpret immunological tests and identify clinical manifestations of allergic conditions. |
| Responsabilities/ Autonomy | Participate responsibly in multidisciplinary management of immunological diseases. |

| **Course Syllabus** | **Hours** |
|---|---|
| **Course #1 – Allergic Diseases**<br>Overview of the pathophysiology, epidemiology, and clinical spectrum of allergic conditions.<br>Introduction to immunologic mechanisms, risk factors, and classification of allergic disorders. | 2 |

| Course Syllabus | Hours |
|---|---|
| **Course #2 – Allergic Rhinitis**<br>Clinical presentation, diagnosis, and management of allergic rhinitis. Discussion of environmental triggers, pharmacological treatment, and immunotherapy options. | 2 |
| **Course #3 – Food Allergies in Infants and Children**<br>Diagnosis and management of food allergies in pediatric populations. Focus on common allergens, clinical manifestations, elimination diets, and emergency interventions. | 2 |
| **Course #4 – Hypersensitivity Reactions – Type I**<br>Mechanisms and clinical implications of immediate (IgE-mediated) hypersensitivity. Conditions discussed include anaphylaxis, urticaria, and atopic dermatitis. | 2 |
| **Course #5 – Hypersensitivity Reactions – Type II**<br>Pathophysiology of antibody-mediated cytotoxic hypersensitivity. Review of associated diseases such as autoimmune hemolytic anemia and Goodpasture syndrome. | 2 |
| **Course #6 – Hypersensitivity Reactions – Type III**<br>Immune complex–mediated hypersensitivity reactions. Clinical correlations with diseases such as systemic lupus erythematosus and serum sickness. | 2 |
| **Course #7 – Hypersensitivity Reactions – Type IV**<br>T-cell mediated (delayed-type) hypersensitivity reactions. Discussion of contact dermatitis, tuberculin skin test, and chronic transplant rejection. | 2 |

| Laboratory Syllabus | Hours |
|---|---|
| **Laboratory Work #1 – Allergies**<br>Practical recognition of common allergic manifestations. Introduction to diagnostic approaches including patient history, physical examination, and allergy testing methods. | 2 |
| **Laboratory Work #2 – Allergic Conjunctivitis**<br>Assessment of ocular allergy symptoms. Practice in differential diagnosis, clinical evaluation, and management strategies for allergic eye conditions. | 2 |
| **Laboratory Work #3 – Angioedema**<br>Evaluation and emergency management of angioedema. Emphasis on identifying potential triggers, distinguishing from anaphylaxis, and acute treatment protocols. | 2 |
| **Laboratory Work #4 – Atopic Dermatitis**<br>Clinical examination of eczematous lesions. Focus on diagnostic criteria, severity assessment, and therapeutic approaches including topical treatments and patient education. | 2 |
| **Laboratory Work #5 – Drug Allergy**<br>Identification and assessment of adverse drug reactions. Practice in clinical history taking, documentation, and risk assessment for future drug exposure. | 2 |
| **Laboratory Work #6 – Aspergillosis**<br>Recognition of allergic and invasive forms of aspergillosis. Practical orientation on radiologic findings, serologic testing, and management principles. | 2 |
| **Laboratory Work #7 – Practical Examination**<br>Evaluation of acquired clinical skills through structured patient simulations or case-based scenarios. Emphasis on diagnostic reasoning and appropriate therapeutic decision-making. | 2 |

**Minimum References:**


1. Burks AW, Holgate ST, O'Hehir RE, Broide DH, editors. **Middleton's allergy: principles and practice**. 9th ed. Philadelphia: Elsevier; 2020.
2. Rich RR, Fleisher TA, Shearer WT, Schroeder HW Jr, Frew AJ, Weyand CM, editors. **Clinical immunology: principles and practice**. 6th ed. Philadelphia: Elsevier; 2023.

| **Minimum References:** |
|---|
| **3.** Abbas AK, Lichtman AH, Pillai S. **Cellular and molecular immunology**. 10th ed. Philadelphia: Elsevier; 2021. |
| **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** |
|---|
| • |

| **How the information is transmitted** | |
|---|---|
| **Type of Activity** | **Teaching methods used** |
| Lecture | • Interactive learning based on logical and progressive presentation of content.<br>• Multimedia projection of lecture materials. |
| 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:** |
|---|
| - |

| **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:** |
|---|
| • 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 throught the semester | 15 % |
| - Projects / Translations / Posters / Essays, etc. | 15 % |
| - Other activities: | 0 % |

**Description of the actual methods of examination – E**

- Multiple choice examination

| **Minimal requirements for grade 5 (or how grade 5 is awarded)** | **Requirements for grade 10 (or how grade 10 is awarded)** |
|---|---|
| • According to the correction scale<br>• At least half of the topics must be correct | • According to the correction scale<br>• At least 90% correct topics |

**Date of completion**
**16.09.2025**

**Discipline Coordinator,**
**Assist.PhD. Moiceanu-Șovărel Ana-Maria**

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

**Course Coordinator,**
**Assist.PhD. Moiceanu-Șovărel Ana-Maria**

**Laboratory Coordinator,**
**Assist.PhD. Moiceanu-Șovărel Ana-Maria**

**Department Approval Date**
**25.09.2025**

**TITU MAIORESCU UNIVERSITY OF BUCHAREST**
**FACULTY OF MEDICINE**
**MEDICINE IN ENGLISH PROGRAM**
**ACADEMIC YEAR: 2025-2026**

# DISCIPLINE FILE

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

| | | | | | | |
|---|---|---|---|---|---|---|
| Discipline`s Name | **MEDICAL SEMIOLOGY (II)** | | | | | |
| Didactic position, name and surname of the **Discipline Coordinator** | Lect. Soare Simona | | | | | |
| Didactic position, name and surname for the **Course Coordinator** | Lect. Soare Simona | | | | | |
| Didactic position, name and surname for the **Coordinator** of the **Seminar / Laboratory / Clinical Traineeship** | Lect. Munteanu Alice<br>PhD.Candidate Popescu Alexandru | | | | | |
| Discipline Code | **MLE.3.6.8** | Formative category of the discipline | | **DS** | | |
| Year of Study | **III** | Semester | **6** | Type of the final evaluation (**E, V**) | | **E6** |
| Discipline Regime (**M**-**m**andatory, **E**-**e**lective) | | | | **M** | No. of credits | **5** |

| | | | | | |
|---|---|---|---|---|---|
| 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 | **125** | Total hours of individual study | **41** |

| **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 | 4 |
| 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 | 5 |
| 10. Consultations | 2 |
| 11. In the field documentation | 0 |
| 12. Documentation from web sources, portals, wiki websites | 7 |
| 13. Tutoring | 2 |
| 14. Examinations | 2 |
| 15. Other activities: | 0 |

| Course name | MEDICAL SEMIOLOGY (II) |
|---|---|
| **Specific professional competencies** | C1 – Clinical evaluation of systemic diseases; C3 – Diagnostic reasoning based on clinical findings. |
| **Transversal competencies** | C5 – Professional communication; C6 – Ethical patient interaction. |
| **General objectives of the discipline** | To provide fundamental knowledge regarding the core scope of Medical Semiology (II).<br>To develop understanding of clinical assessment and diagnostic reasoning relevant to Medical Semiology (II).<br>To familiarize students with evidence-based principles, practical applications and patient-safety considerations in Medical Semiology (II).<br>To establish a foundation for supervised clinical practice, academic reasoning and interdisciplinary collaboration in Medical Semiology (II). |
| **Specific objectives of the discipline** | Identify common concepts, clinical presentations or practical situations addressed in Medical Semiology (II).<br>Explain key mechanisms, diagnostic principles and professional standards relevant to Medical Semiology (II).<br>Interpret essential clinical, laboratory, imaging, histopathological, epidemiological or technological data when applicable.<br>Apply discipline-specific reasoning to formulate appropriate diagnostic, therapeutic, preventive or procedural approaches under supervision.<br>Demonstrate responsible communication, documentation, teamwork and patient-safety awareness in academic and clinical contexts. |

| Learning Outcomes | |
|---|---|
| Knowledge | Describe advanced clinical examination principles and diagnostic reasoning for systemic diseases. |
| Skills | Perform comprehensive clinical examination and integrate findings into diagnostic hypotheses. |
| Responsabilities/ Autonomy | Demonstrate increasing autonomy in clinical reasoning while respecting professional standards. |

| Course Syllabus | Hours |
|---|---|
| **Course #1 – Cardiovascular System**<br>Assessment of the heart and pericardium: symptoms such as precordial pain, dyspnea, and palpitations. Objective examination techniques (inspection, palpation, percussion, | 2 |

| Course Syllabus | Hours |
|---|---|
| auscultation). Paraclinical investigations: ECG, phonocardiogram, echocardiography, radiology, nuclear medicine, cardiac catheterization, and stress tests. | |
| **Course #2 – Syndromes of Cardiac and Pericardial Pathology**<br>Mitral stenosis and insufficiency, aortic stenosis and insufficiency, myocardial and pericardial syndromes, coronary insufficiency, left and right ventricular failure syndromes. | 2 |
| **Course #3 – Vascular System Semiology and Propedeutics**<br>Arterial diseases: oscillometry, Doppler, thermography, arteriography. Blood pressure measurement. Venous diseases: venous pressure, phlebography, ultrasonography. Peripheral ischemia, venous occlusion syndromes, and lymphatic system evaluation (lymphography, lymphoscintigraphy). | 2 |
| **Course #4 – Digestive System – Part 1**<br>Oral cavity, pharynx, and esophagus. Clinical signs and techniques for upper GI tract evaluation. | 2 |
| **Course #5 – Digestive System – Part 2**<br>Abdomen, stomach, duodenum, and intestines. Symptoms (pain, bloating), clinical examination (topography, inspection, palpation), and complementary explorations: peritoneal puncture, radiology, endoscopy, stool analysis. | 2 |
| **Course #6 – Digestive System – Part 3**<br>Liver, gallbladder, and bile ducts. Anamnesis and symptoms. Clinical examination and functional/morphological explorations including ultrasound and duodenal probing. | 2 |
| **Course #7 – Digestive System – Part 4**<br>Exocrine and endocrine pancreas: symptoms, physical exam, and investigations (blood sugar tests, glucose tolerance, ultrasound, CT, scintigraphy). | 2 |
| **Course #8 – Digestive Syndromes**<br>Ascites, esophageal syndrome, gastric emptying disorders, diarrhea, constipation, ano-rectal syndrome, intestinal obstruction, jaundice, portal hypertension, hepatic failure, acute peritonitis. | 2 |
| **Course #9 – Renal System**<br>Anamnesis and symptoms of renal disorders. Clinical and paraclinical evaluation of kidneys, bladder, and urethra: inspection, percussion, palpation, auscultation. | 2 |
| **Course #10 – Complementary Examinations of the Renal System**<br>Urinalysis: macroscopic, microscopic, chemical, bacteriological. Imaging and morphological investigations: radiography, CT, ultrasound, renal biopsy. Functional renal tests. | 2 |
| **Course #11 – Major Renal Syndromes**<br>Urinary syndrome, water-salt retention, cardiovascular and neuropsychiatric involvement, humoral alterations, renal failure. Features of syndromes in different nephropathies. | 2 |
| **Course #12 – Hematopoietic System**<br>Evaluation of spleen, red blood cells, white series, and lymphoreticular system. Anamnesis, symptoms, and paraclinical methods (ultrasound, puncture, biopsy, scintigraphy). | 2 |
| **Course #13 – Hemostasis**<br>Anamnesis and symptoms in bleeding disorders. Objective exam and lab investigations for coagulation and platelet function. | 2 |
| **Course #14 – Syndromes in Blood and Hematopoietic Organ Diseases**<br>Anemia, hemorrhagic syndrome, lymph node enlargement, splenomegaly, bone marrow failure, and leukemia-related syndromes. | 2 |

| Laboratory Syllabus | Hours |
|---|---|
| **Laboratory Work #1 – Semiology of the Cardiovascular System – Part I** | 4 |

| Laboratory Syllabus | Hours |
|---|---|
| Clinical approach to heart and pericardial diseases. Anamnesis with emphasis on precordial pain, dyspnea, and palpitations. Objective examination: inspection, palpation (apex beat, cardiac sounds, fremitus, pericardial friction), percussion, and auscultation techniques and findings. | |
| **Laboratory Work #2 – Semiology of the Cardiovascular System – Part II**<br>Paraclinical exploration methods including ECG interpretation, phonocardiography, mechanograms, radiology, echocardiography, and stress testing. Introduction to vascular disease evaluation: oscillometry, skin thermometry, plethysmography, arteriography. Blood pressure measurement, evaluation of hypertension and hypotension. | 4 |
| **Laboratory Work #3 – Semiology of the Digestive System – Part I**<br>Examination of the mouth, pharynx, and esophagus. Relevant anamnesis and clinical signs. | 4 |
| **Laboratory Work #4 – Semiology of the Digestive System – Part II**<br>Complementary examinations of the esophagus including radiological imaging and esophagoscopy. | 4 |
| **Laboratory Work #5 – Semiology of the Digestive System – Part III**<br>Assessment of the abdomen, stomach, duodenum, and intestines. Palpation and percussion techniques for abdominal evaluation. | 4 |
| **Laboratory Work #6 – Semiology of the Digestive System – Part IV**<br>Comprehensive anamnesis and symptom assessment. Integration of general and systemic symptoms. Objective examination and complementary diagnostics. | 4 |
| **Laboratory Work #7 – Semiology of the Digestive System – Part V**<br>Evaluation of the liver, gallbladder, and bile ducts. Review of anamnesis, symptomatology, and general objective exam findings. | 4 |
| **Laboratory Work #8 – Semiology of the Digestive System – Part VI**<br>Detailed techniques: inspection, palpation, percussion, auscultation. Complementary investigations including functional and morphological tests, duodenal probing, radiology, and ultrasound. | 4 |
| **Laboratory Work #9 – Semiology of the Digestive System – Part VII**<br>Study of the exocrine and endocrine pancreas. Clinical features and examination protocol. | 4 |
| **Laboratory Work #10 – Semiology of the Digestive System – Part VIII**<br>In-depth anamnesis, physical examination of the pancreas, and review of complementary tests such as blood glucose levels, imaging, and endocrine function evaluation. | 4 |
| **Laboratory Work #11 – Semiology of the Renal System**<br>Focused anamnesis on renal pathology. Symptoms including pain and urinary disorders. General and local physical examination of the kidneys and urinary tract. | 4 |
| **Laboratory Work #12 – Semiology of the Hematopoietic System – Part I**<br>Exploration of the spleen, erythrocytic line, lymphoreticular system, and leukocytes. Hemostasis evaluation. | 4 |
| **Laboratory Work #13 – Semiology of the Hematopoietic System – Part II**<br>Anamnesis and identification of specific symptoms in hematological disorders. Objective examination techniques. | 4 |
| **Laboratory Work #14 – Semiology of the Hematopoietic System – Part III**<br>Complementary investigations: duodenal probing, radiologic assessment, scintigraphy, and ultrasonography of hematopoietic organs. | 4 |

| Minimum References: |
|---|
| **1.** Bickley LS. **Bates' guide to physical examination and history taking**. 13th ed. Philadelphia: Wolters Kluwer; 2020. |

| Minimum References: |
|---|
| **2.** Douglas G, Nicol F, Robertson C. **Macleod's clinical examination**. 15th ed. Edinburgh: Elsevier; 2020. |
| **3.** Talley NJ, O'Connor S. **Clinical examination: a systematic guide to physical diagnosis**. 8th ed. Chatswood (NSW): Elsevier; 2020. |
| **4.** Sapira JD. **The art and science of bedside diagnosis**. 5th ed. Philadelphia: Wolters Kluwer; 2014 |
| **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 | • Interactive learning based on logical and progressive presentation of content.<br>• Multimedia projection of lecture materials. |
| 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: |
|---|
| - |

| 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: |
|---|
| • 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 throught the semester | 15 % |
| - Projects / Translations / Posters / Essays, etc. | 15 % |
| - Other activities: | 0 % |

**Description of the actual methods of examination – E**

- Multiple choice examination

| Minimal requirements for grade 5 (or how grade 5 is awarded) | Requirements for grade 10 (or how grade 10 is awarded) |
|---|---|
| • According to the correction scale | • According to the correction scale |

| | |
|---|---|
| • At least half of the topics must be correct | • At least 90% correct topics |

**Date of completion**
**10.09.2025**

**Discipline Coordinator,**
**Lect. Soare Simona**

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

**Course Coordinator,**
**Lect. Soare Simona**

**Laboratory Coordinator,**
**Lect. Munteanu Alice**
**PhD.Candidate Popescu Alexandru**

**Department Approval Date**
**25.09.2025**

**TITU MAIORESCU UNIVERSITY OF BUCHAREST**
**FACULTY OF MEDICINE**
**MEDICINE IN ENGLISH PROGRAM**
**ACADEMIC YEAR: 2025-2026**

# DISCIPLINE FILE

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

| | | | | | | |
|---|---|---|---|---|---|---|
| Discipline`s Name | **SURGICAL SEMIOLOGY (II)** | | | | | |
| Didactic position, name and surname of the **Discipline Coordinator** | Assoc.Prof. Moldovan Alec Cosmin | | | | | |
| Didactic position, name and surname for the **Course Coordinator** | Assoc.Prof. Moldovan Alec Cosmin | | | | | |
| Didactic position, name and surname for the **Coordinator** of the **Seminar / Laboratory / Clinical Traineeship** | Assoc.Prof. Moldovan Alec Cosmin | | | | | |
| Discipline Code | **MLE.3.6.9** | Formative category of the discipline | | **DS** | | |
| Year of Study | **III** | Semester | **6** | Type of the final evaluation (**E, V**) | | **E6** |
| Discipline Regime (**M**-**m**andatory, **E**-**e**lective) | | | | **M** | No. of credits | **5** |

| | | | | | |
|---|---|---|---|---|---|
| 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 | **125** | Total hours of individual study | **41** |

| **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 | 4 |
| 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 | 5 |
| 10. Consultations | 2 |
| 11. In the field documentation | 0 |
| 12. Documentation from web sources, portals, wiki websites | 7 |
| 13. Tutoring | 2 |
| 14. Examinations | 2 |
| 15. Other activities: | 0 |

| **Course name** | SURGICAL SEMIOLOGY (II) |
|---|---|
| **Specific professional competencies** | C1 – Evaluation of surgical pathology; C3 – Prioritization of surgical patients. |
| **Transversal competencies** | C5 – Teamwork; C6 – Professional responsibility. |
| **General objectives of the discipline** | To provide fundamental knowledge regarding the core scope of Surgical Semiology (II).<br>To develop understanding of clinical assessment and diagnostic reasoning relevant to Surgical Semiology (II).<br>To familiarize students with evidence-based principles, practical applications and patient-safety considerations in Surgical Semiology (II).<br>To establish a foundation for supervised clinical practice, academic reasoning and interdisciplinary collaboration in Surgical Semiology (II). |
| **Specific objectives of the discipline** | Identify common concepts, clinical presentations or practical situations addressed in Surgical Semiology (II).<br>Explain key mechanisms, diagnostic principles and professional standards relevant to Surgical Semiology (II).<br>Interpret essential clinical, laboratory, imaging, histopathological, epidemiological or technological data when applicable.<br>Apply discipline-specific reasoning to formulate appropriate diagnostic, therapeutic, preventive or procedural approaches under supervision.<br>Demonstrate responsible communication, documentation, teamwork and patient-safety awareness in academic and clinical contexts. |

| **Learning Outcomes** | |
|---|---|
| Knowledge | Explain clinical manifestations and diagnostic principles of major surgical conditions. |
| Skills | Perform detailed surgical examinations and recognize urgent surgical situations. |
| Responsabilities/ Autonomy | Support clinical decision-making processes under supervision and maintain patient safety. |

| **Course Syllabus** | **Hours** |
|---|---|
| **Course #1 – Surgical Semiology of the Colon and Appendix**<br>Pathologies of the colon: diverticulosis, megacolon, ulcerative, ischemic, pseudomembranous, post-irradiation, and amoebic colitis. Overview of Crohn's disease, benign and malignant tumors. Acute and chronic appendicitis, appendix tumors. | 2 |

| Course Syllabus | Hours |
|---|---|
| **Course #2 – Surgical Semiology of the Rectum and Anal Canal**<br>Conditions of the rectum and anus: rectal prolapse, ulcerative-hemorrhagic rectocolitis, tumors, hemorrhoids, anal fissure, infections (abscesses, fistulas), anal incontinence. General notions on lower gastrointestinal hemorrhages. | 2 |
| **Course #3 – Surgical Semiology of the Chest**<br>Chest trauma, purulent pleurisy, pulmonary hydatid cyst, and bronchopulmonary cancer. Clinical signs and diagnostic approach. | 2 |
| **Course #4 – Surgical Semiology of Abdominal Wall Defects**<br>Evaluation and diagnosis of inguinal, femoral, and umbilical hernias, including rare hernias of the abdominal wall. | 2 |
| **Course #5 – Surgical Semiology of the Liver and Extrahepatic Bile Ducts – Part I**<br>Vesicular and bile lithiasis. Gallbladder and bile duct cancer: clinical manifestations and diagnostic strategy. | 2 |
| **Course #6 – Surgical Semiology of the Liver and Extrahepatic Bile Ducts – Part II**<br>Caroli's disease, intrahepatic lithiasis, liver cirrhosis, abscesses, hepatic hydatid cyst, and liver tumors. | 2 |
| **Course #7 – Surgical Semiology of the Pancreas – Part I**<br>Acute and chronic pancreatitis. Diagnostic approach, complications, and differential diagnosis. | 2 |
| **Course #8 – Surgical Semiology of the Pancreas – Part II**<br>Neoplasms of the endocrine and exocrine pancreas. Clinical signs and methods of evaluation. | 2 |
| **Course #9 – Surgical Semiology of the Spleen**<br>Pathologies such as hematological/immunological hypersplenism, splenic trauma, and abscesses. | 2 |
| **Course #10 – Surgical Semiology of Mechanical Jaundice**<br>Etiology, clinical signs, diagnostic algorithm, and surgical implications in obstructive jaundice. | 2 |
| **Course #11 – Surgical Semiology of Peripheral Vascular Diseases – Part I**<br>Chronic peripheral ischemia: obliterating atherosclerosis, thromboangiitis obliterans, and diabetic arteriopathy. | 2 |
| **Course #12 – Surgical Semiology of Peripheral Vascular Diseases – Part II**<br>Acute peripheral ischemia syndrome: signs, causes, and urgency of diagnosis and treatment. | 2 |
| **Course #13 – Surgical Semiology of Peripheral Vascular Diseases – Part III**<br>Varicose disease, superficial and deep vein thrombophlebitis, and thromboembolic disease. | 2 |
| **Course #14 – Introduction to Basic Surgical Techniques**<br>Incision, suture, drainage, puncture. Anesthesia and intensive care: types, complications. Overview of electrosurgery, mechanical sutures, minimally invasive and robotic surgery, and virtual surgical simulations. | 2 |

| Laboratory Syllabus | Hours |
|---|---|
| **Laboratory Work #1 – Nosocomial Infections and Antibiotic Therapy in Surgery**<br>Definition and importance of nosocomial infections. Principles of antibiotic therapy in surgical practice and elective treatment indications. | 4 |
| **Laboratory Work #2 – Clinical Case: Chest Trauma with Surgical Indication**<br>Assessment of clinical signs, relevant biological investigations, and imaging techniques in thoracic trauma. | 4 |
| **Laboratory Work #3 – Soft Tissue Trauma**<br>Clinical approach to contusions and wounds. Evaluation techniques and management strategies. | 4 |
| **Laboratory Work #4 – Vascular, Nervous, and Tendinous Trauma** | 4 |

| Laboratory Syllabus | Hours |
|---|---|
| Identification and assessment of trauma affecting arteries, nerves, and tendons. Diagnostic and therapeutic implications. | |
| **Laboratory Work #5 – Clinical Case: Venous Insufficiency in the Lower Limbs**<br>Semiological features, biological tests, and imaging in chronic venous insufficiency. | 4 |
| **Laboratory Work #6 – Clinical Case: Ischemic Syndrome of the Lower Limb**<br>Evaluation of ischemic signs, diagnostic investigations, and therapeutic options. | 4 |
| **Laboratory Work #7 – Clinical Case: Abdominal Wall Defects**<br>Recognition of semiological elements and imaging in hernias and other abdominal wall pathologies. | 4 |
| **Laboratory Work #8 – Clinical Case: Biliary Disease**<br>Assessment of symptoms and imaging findings in gallbladder and bile duct pathology. | 4 |
| **Laboratory Work #9 – Clinical Case: Liver Disease Requiring Surgery**<br>Analysis of semiological data and imaging in surgical liver conditions. | 4 |
| **Laboratory Work #10 – Clinical Case: Pancreatic Pathology**<br>Clinical and imaging approach to exocrine and endocrine pancreatic diseases with surgical indication. | 4 |
| **Laboratory Work #11 – Surgical Syndrome Discussion: Jaundice**<br>Interactive analysis of benign and malignant causes of jaundice. Diagnostic reasoning and differential diagnosis. | 4 |
| **Laboratory Work #12 – Surgical Syndrome Discussion: Intestinal Occlusion**<br>Clinical reasoning around intestinal obstruction: symptoms, investigations, and management principles. | 4 |
| **Laboratory Work #13 – Surgical Syndrome Discussion: Acute Pancreatitis**<br>Evaluation of the clinical presentation, imaging, and laboratory data in acute pancreatitis. | 4 |
| **Laboratory Work #14 – Surgical Syndrome Discussion: Polytrauma**<br>Multidisciplinary case discussion focused on the approach to polytrauma patients in surgical settings. | 4 |

| Minimum References: |
|---|
| **1.** Bailey H, Love R, Bulstrode CJK, O'Connell PR, McCaskie AW. **Bailey & Love's short practice of surgery**. 27th ed. Boca Raton (FL): CRC Press; 2023. |
| **2.** Talley NJ, O'Connor S. **Clinical examination: a systematic guide to physical diagnosis**. 8th ed. Chatswood (NSW): Elsevier; 2020. |
| **3.** Williams NS, O'Connell PR, McCaskie AW, editors. **Bailey & Love's essential clinical anatomy**. 2nd ed. Boca Raton (FL): CRC Press; 2020. |
| **4.** Dehn TCB, Aspinall R. **Browse's introduction to the symptoms and signs of surgical disease**. 5th ed. Boca Raton (FL): CRC Press; 2014. |
| **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 | • Interactive learning based on logical and progressive presentation of content. |

| How the information is transmitted | |
|---|---|
| | • Multimedia projection of lecture materials. |
| 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: |
|---|
| - |

| 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: |
|---|
| • 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 throught the semester | 15 % |
| - Projects / Translations / Posters / Essays, etc. | 15 % |
| - Other activities: | 0 % |

**Description of the actual methods of examination – E**

- Multiple choice examination

| Minimal requirements for grade 5 (or how grade 5 is awarded) | Requirements for grade 10 (or how grade 10 is awarded) |
|---|---|
| • According to the correction scale<br>• At least half of the topics must be correct | • According to the correction scale<br>• At least 90% correct topics |

**Date of completion**
**11.09.2025**

**Discipline Coordinator,**
**Assoc.Prof. Moldovan Alec Cosmin**

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

**Course Coordinator,**
**Assoc.Prof. Moldovan Alec Cosmin**

**Laboratory Coordinator,**
**Assoc.Prof. Moldovan Alec Cosmin**

**Department Approval Date**
**25.09.2025**

**TITU MAIORESCU UNIVERSITY OF BUCHAREST**
**FACULTY OF MEDICINE**
**MEDICINE IN ENGLISH PROGRAM**
**ACADEMIC YEAR: 2025-2026**

# DISCIPLINE FILE

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

| | | | | | | |
|---|---|---|---|---|---|---|
| Discipline`s Name | **ANATOMICAL PATHOLOGY (II)** | | | | | |
| Didactic position, name and surname of the **Discipline Coordinator** | Lect. Pechianu Cătălin, MD, PhD | | | | | |
| Didactic position, name and surname for the **Course Coordinator** | Lect. Pechianu Cătălin, MD, PhD | | | | | |
| Didactic position, name and surname for the **Coordinator** of the **Seminar / Laboratory / Clinical Traineeship** | Lect. Pechianu Cătălin, MD, PhD<br>Assist. Iorgescu Andreea, MD, PhD<br>Assist. Stoica-Mustafa Elena, MD, PhD | | | | | |
| Discipline Code | **MLE.3.6.10** | Formative category of the discipline | | **FS** | | |
| Year of Study | **III** | Semester | **6** | Type of the final evaluation (**E, V**) | | **E6** |
| Discipline Regime (**M**-**m**andatory, **E**-**e**lective) | | | | **M** | No. of credits | **3** |

| | | | | | |
|---|---|---|---|---|---|
| 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 | **75** | Total hours of individual study | **19** |

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

| Distribution of time pool per week | Hours |
|---|---|
| 7. Preparing for different written exams | 0 |
| 8. Preparing for oral examinations | 0 |
| 9. Preparing for the final examination | 2 |
| 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 | ANATOMICAL PATHOLOGY (II) |
|---|---|
| **Specific professional competencies** | C1 – Identification of pathological processes; C2 – Integration of pathology in diagnosis. |
| **Transversal competencies** | C4 – Analytical thinking; C6 – Professional responsibility. |
| **General objectives of the discipline** | To provide fundamental knowledge regarding the core scope of Anatomical Pathology (II).<br>To develop understanding of clinical assessment and diagnostic reasoning relevant to Anatomical Pathology (II).<br>To familiarize students with evidence-based principles, practical applications and patient-safety considerations in Anatomical Pathology (II).<br>To establish a foundation for supervised clinical practice, academic reasoning and interdisciplinary collaboration in Anatomical Pathology (II). |
| **Specific objectives of the discipline** | Identify common concepts, clinical presentations or practical situations addressed in Anatomical Pathology (II).<br>Explain key mechanisms, diagnostic principles and professional standards relevant to Anatomical Pathology (II).<br>Interpret essential clinical, laboratory, imaging, histopathological, epidemiological or technological data when applicable.<br>Apply discipline-specific reasoning to formulate appropriate diagnostic, therapeutic, preventive or procedural approaches under supervision.<br>Demonstrate responsible communication, documentation, teamwork and patient-safety awareness in academic and clinical contexts. |

| Learning Outcomes | |
|---|---|
| Knowledge | Explain advanced mechanisms of disease progression at cellular and tissue levels. |
| Skills | Interpret histopathological findings in correlation with clinical data. |
| Responsabilities/ Autonomy | Apply scientific and ethical standards in pathological interpretation. |

| Course Syllabus | Hours |
|---|---|
| **Course #1 – Respiratory System Pathology – Part 1**<br>Diseases of the upper airways (rhinopharyngitis, adenoiditis, laryngitis, tracheitis). Bronchial and pulmonary conditions including malformations, acute/chronic bronchitis, bronchiectasis, bronchial asthma, atelectasis, and emphysema. | 2 |

| Course Syllabus | Hours |
|---|---|
| **Course #2 – Respiratory System Pathology – Part 2**<br>Lobar pneumonia, bronchopneumopathies, interstitial pneumopathies, pulmonary suppurations (including gangrene), tuberculosis, interstitial fibrosis, pneumoconiosis, bronchopulmonary tumors. Pleurisy and pleural tumors. | 2 |
| **Course #3 – Cardiovascular System Pathology – Part 1**<br>Congenital cardiovascular malformations, cardiac dilations and hypertrophies, ischemic heart disease, valvular heart diseases. | 2 |
| **Course #4 – Cardiovascular System Pathology – Part 2**<br>Endocarditis (septic and aseptic), myocarditis, pericarditis, pulmonary heart disease. Vascular conditions including degenerative and inflammatory arteriopathies, aneurysms, thrombophlebitis, and phlebotrombosis. | 2 |
| **Course #5 – Digestive System, Accessory Organs, and Peritoneum Pathology – Part 1**<br>Oral and salivary gland conditions: stomatitis, angina, glandular inflammation and tumors. Esophageal pathology including malformations, caustic injuries, stenoses, and tumors. | 2 |
| **Course #6 – Digestive System Pathology – Part 2**<br>Stomach disorders: gastritis, ulcers, tumors. Small and large intestine: enteritis, ulcerative colitis, terminal ileitis, appendicitis, dysenteries, rectitis, intestinal tuberculosis and typhoid lesions, ileus, bowel tumors. | 2 |
| **Course #7 – Digestive System, Accessory Organs, and Peritoneum Pathology – Part 3**<br>Liver and biliary tract pathology: hepatitis, cirrhosis, lithiasis, cholangitis, tumors. Pancreas: cystic fibrosis, pancreatitis, tumors. Peritoneum: acute and chronic peritonitis, tumors. | 2 |
| **Course #8 – Urinary System Pathology**<br>Congenital malformations, nephropathies (glomerular, tubular, interstitial), nephrolithiasis, nephroangiosclerosis, hydronephrosis, pyonephrosis, kidney tumors. Bladder and urinary tract inflammation and tumors. | 2 |
| **Course #9 – Male and Female Genital System Pathology – Part 1**<br>Male: malformations, orchiepididymitis, prostatitis, benign prostatic hypertrophy, tumors. | 2 |
| **Course #10 – Male and Female Genital System Pathology – Part 2**<br>Female: congenital malformations, cervicitis, cervical dysplasia, endometriosis, uterine and ovarian tumors, ectopic pregnancy, hydatidiform mole, choriocarcinoma. Mastitis, fibrocystic changes, and breast tumors. | 2 |
| **Course #11 – Hematopoietic and Lymphoid System Pathology**<br>Disorders of hematopoiesis and leukopoiesis: megaloblastic anemia, erythroblastosis. Leukemias (acute and chronic), myelopathies, lymphadenopathies, Hodgkin's and non-Hodgkin's lymphomas. Splenic diseases. | 2 |
| **Course #12 – Endocrine System Pathology**<br>Thyroid disorders (goiter, thyroiditis, Basedow's disease, tumors), parathyroid adenomas, pituitary adenomas, adrenal diseases (Addison's, tuberculosis, tumors). | 2 |
| **Course #13 – Locomotor System Pathology**<br>Bone and joint dystrophies, osteitis, osteomyelitis, arthritis (specific and nonspecific), bone and soft tissue tumors, muscular and fascial diseases. | 2 |
| **Course #14 – Nervous System Pathology**<br>Congenital malformations, trauma, cerebral hemorrhages and infarcts, meningitis, encephalitis, and tumors of the CNS and PNS. | 2 |

| Laboratory Syllabus | Hours |
|---|---|
| **Laboratory Work #1 – Microscopy – Cardiovascular System** | 2 |

| Laboratory Syllabus | Hours |
|---|---|
| Microscopic study of valvular endocarditis, rheumatic myocarditis, Fiedler's myocarditis, fibrinous pericarditis, cardiac cirrhosis (nutmeg liver), and aortic atheromatosis. | |
| **Laboratory Work #2 – Macroscopy – Cardiovascular System**<br>Observation of cardiovascular lesions in cadaveric specimens and anatomical-pathological parts related to cardiovascular pathology. | 2 |
| **Laboratory Work #3 – Microscopy – Respiratory System**<br>Microscopic identification of lobar pneumonia, bronchopneumonia, interstitial pneumonia, pulmonary tuberculosis, silicosis, pulmonary emphysema, and pulmonary carcinoma. | 2 |
| **Laboratory Work #4 – Macroscopy – Respiratory System**<br>Gross examination of respiratory system lesions in cadavers and anatomical specimens showing various respiratory pathologies. | 2 |
| **Laboratory Work #5 – Microscopy – Digestive Tract**<br>Histological analysis of gastric ulcer, acute phlegmonous appendicitis, acute enteritis, mycotic enteritis, Crohn's disease, and rectal adenocarcinoma. | 2 |
| **Laboratory Work #6 – Macroscopy – Digestive Tract**<br>Macroscopic study of digestive tract lesions in necropsy and anatomical-pathological specimens. | 2 |
| **Laboratory Work #7 – Microscopy – Liver and Pancreas**<br>Histological evaluation of acute epidemic hepatitis, chronic aggressive hepatitis, liver cirrhosis, hepatocellular carcinoma, acute cholecystitis, pancreatic cytosteatonecrosis, pancreatic cystic fibrosis, and hepatic hemochromatosis. | 2 |
| **Laboratory Work #8 – Macroscopy – Liver and Pancreas**<br>Visual examination of hepatic and pancreatic lesions in necropsy and anatomical-pathological parts. | 2 |
| **Laboratory Work #9 – Microscopy – Urinary System**<br>Microscopy of diffuse glomerulonephritis, amyloid nephrosis, acute and chronic pyelonephritis, renal tuberculosis, and clear cell renal carcinoma. | 2 |
| **Laboratory Work #10 – Macroscopy – Urinary System**<br>Gross pathology of renal lesions observed in necropsy and anatomical-pathological specimens. | 2 |
| **Laboratory Work #11 – Microscopy – Genital System**<br>Microscopic study of glandulo-cystic endometrial hyperplasia, cervical carcinoma, papillary cystadenoma of the ovary, hydatidiform mole, ectopic tubal pregnancy, benign prostatic hyperplasia, and testicular seminoma. | 2 |
| **Laboratory Work #12 – Macroscopy – Genital System**<br>Examination of genital tract lesions in necropsy and anatomical specimens. | 2 |
| **Laboratory Work #13 – Microscopy – Lymphoid, Hematopoietic, and Endocrine Systems**<br>Study of malignant lymphomas, Hodgkin's disease, leukemic infiltration of the liver, colloid goiter, Basedow's goiter, and chronic lymphomatous thyroiditis. | 2 |
| **Laboratory Work #14 – Macroscopy – Lymphoid and Endocrine Systems**<br>Macroscopic pathology of lymphoid and endocrine lesions in cadavers and anatomical-pathological samples. | 2 |

**Minimum References:**


1. Kumar V, Abbas AK, Aster JC. **Robbins and Cotran pathologic basis of disease**. 10th ed. Philadelphia: Elsevier; 2020.
2. Kumar V, Abbas AK, Aster JC. **Robbins basic pathology**. 10th ed. Philadelphia: Elsevier; 2018.
3. Rosai J, Ackerman LV, editors. **Rosai and Ackerman's surgical pathology**. 11th ed. Philadelphia: Elsevier; 2018.

| **Minimum References:** |
|---|
| **4.** WHO Classification of Tumours Editorial Board. **WHO classification of tumours**. 5th ed. Lyon: International Agency for Research on Cancer; 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 | • Interactive learning based on logical and progressive presentation of content.<br>• Multimedia projection of lecture materials. |
| 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:** |
|---|
| - |

| **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:** |
|---|
| • 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 throught the semester | 15 % |
| - Projects / Translations / Posters / Essays, etc. | 15 % |
| - Other activities: | 0 % |

**Description of the actual methods of examination – E**

- Multiple choice examination

| **Minimal requirements for grade 5 (or how grade 5 is awarded)** | **Requirements for grade 10 (or how grade 10 is awarded)** |
|---|---|
| • According to the correction scale<br>• At least half of the topics must be correct | • According to the correction scale<br>• At least 90% correct topics |

**Date of completion**
**16.09.2025**

**Discipline Coordinator,**
**Lect. Pechianu Cătălin**

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

**Course Coordinator,**
**Lect. Pechianu Cătălin**

**Laboratory Coordinator,**
**Lect. Pechianu Cătălin**
**Assist. Iorgescu Andreea**
**Assist. Stoica-Mustafa Elena**

**Department Approval Date**
**25.09.2025**

**TITU MAIORESCU UNIVERSITY OF BUCHAREST**
**FACULTY OF MEDICINE**
**MEDICINE IN ENGLISH PROGRAM**
**ACADEMIC YEAR: 2025-2026**

# DISCIPLINE FILE

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

| | | | | | | |
|---|---|---|---|---|---|---|
| Discipline`s Name | **PATHOPHYSIOLOGY (II)** | | | | | |
| Didactic position, name and surname of the **Discipline Coordinator** | Prof. Nemeș Roxana Maria | | | | | |
| Didactic position, name and surname for the **Course Coordinator** | Prof. Nemeș Roxana Maria | | | | | |
| Didactic position, name and surname for the **Coordinator** of the **Seminar / Laboratory / Clinical Traineeship** | Prof. Nemeș Roxana Maria | | | | | |
| Discipline Code | **MLE.3.6.11** | Formative category of the discipline | | **FS** | | |
| Year of Study | **III** | Semester | **6** | Type of the final evaluation (**E, V**) | | **E6** |
| Discipline Regime (**M**-**m**andatory, **E**-**e**lective) | | | | **M** | No. of credits | **3** |

| | | | | | |
|---|---|---|---|---|---|
| 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 | **75** | Total hours of individual study | **19** |

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

| Distribution of time pool per week | Hours |
|---|---|
| 7. Preparing for different written exams | 0 |
| 8. Preparing for oral examinations | 0 |
| 9. Preparing for the final examination | 2 |
| 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** | PATHOPHYSIOLOGY (II) |
|---|---|
| **Specific professional competencies** | C1 – Understanding systemic disease mechanisms; C2 – Application of pathophysiology in clinical reasoning. |
| **Transversal competencies** | C4 – Critical analysis; C6 – Responsibility in clinical reasoning. |
| **General objectives of the discipline** | To provide fundamental knowledge regarding the core scope of Pathophysiology (II).<br>To develop understanding of clinical assessment and diagnostic reasoning relevant to Pathophysiology (II).<br>To familiarize students with evidence-based principles, practical applications and patient-safety considerations in Pathophysiology (II).<br>To establish a foundation for supervised clinical practice, academic reasoning and interdisciplinary collaboration in Pathophysiology (II). |
| **Specific objectives of the discipline** | Identify common concepts, clinical presentations or practical situations addressed in Pathophysiology (II).<br>Explain key mechanisms, diagnostic principles and professional standards relevant to Pathophysiology (II).<br>Interpret essential clinical, laboratory, imaging, histopathological, epidemiological or technological data when applicable.<br>Apply discipline-specific reasoning to formulate appropriate diagnostic, therapeutic, preventive or procedural approaches under supervision.<br>Demonstrate responsible communication, documentation, teamwork and patient-safety awareness in academic and clinical contexts. |

| **Learning Outcomes** | |
|---|---|
| Knowledge | Describe complex pathophysiological processes affecting multiple organ systems. |
| Skills | Correlate pathophysiological alterations with clinical symptoms and laboratory data. |
| Responsabilities/ Autonomy | Demonstrate autonomy in analyzing disease mechanisms within academic and clinical contexts. |

| Course Syllabus | Hours |
|---|---|
| **Course #1 – Atherosclerosis and Coronary Artery Disease**<br>Mechanisms and stages of arterial atherosclerosis and its role in the development of ischemic heart disease and myocardial infarction. | 2 |
| **Course #2 – Cardiomyopathies and Valvulopathies**<br>Pathophysiological changes in myocardial and valvular structure and function, including primary and secondary cardiomyopathies and valvular insufficiencies and stenoses. | 2 |

| Course Syllabus | Hours |
|---|---|
| **Course #3 – Heart Failure – Part I**<br>Initial mechanisms and compensatory responses in heart failure; left vs. right ventricular failure; pathophysiology of low output states. | 2 |
| **Course #4 – Heart Failure – Part II**<br>Progression of chronic heart failure; neurohormonal activation; decompensation and organ involvement. | 2 |
| **Course #5 – Rhythm and Conduction Disorders**<br>Pathophysiology of arrhythmias, including bradycardia, tachycardia, fibrillation, and conduction blockages. | 2 |
| **Course #6 – Respiratory System – Part I**<br>Pathophysiological changes in ventilation, perfusion, and gas exchange; obstructive and restrictive syndromes. | 2 |
| **Course #7 – Respiratory System – Part II**<br>Disorders of respiratory mechanics, hypoxemia, hypercapnia, and respiratory failure. | 2 |
| **Course #8 – Digestive System – Esophageal and Gastric Disorders**<br>Pathophysiology of motility and secretory disorders of the esophagus and stomach, including GERD, gastritis, and ulcer disease. | 2 |
| **Course #9 – Digestive System – Intestine and Accessory Glands**<br>Functional impairments in the pancreas, liver, gallbladder, and intestinal tract; malabsorption and inflammatory bowel diseases. | 2 |
| **Course #10 – Renal and Urinary System – Part I**<br>Glomerular, tubular, and interstitial nephropathies; acute kidney injury and vascular renal diseases. | 2 |
| **Course #11 – Renal and Urinary System – Part II**<br>Chronic kidney disease and systemic effects of renal insufficiency; progression and complications. | 2 |
| **Course #12 – Circulatory Shock**<br>Classification and mechanisms of shock: hypovolemic, cardiogenic, distributive; cellular and systemic responses to perfusion failure. | 2 |
| **Course #13 – Endocrine System Disorders**<br>Pathophysiology of hormonal imbalances: hypo- and hyperfunction of endocrine glands and systemic effects. | 2 |
| **Course #14 – Seminar**<br>Case-based discussion and integrative review of topics covered throughout the semester. | 2 |

| Laboratory Syllabus | Hours |
|---|---|
| **Laboratory Work #1 – Electrocardiogram – The Normal Trace**<br>Study and interpretation of a standard ECG tracing; identifying the P wave, QRS complex, T wave, intervals, and normal rhythm. | 2 |
| **Laboratory Work #2 – Rhythm and Conduction Disorders**<br>Recognition and analysis of common arrhythmias and conduction blocks through ECG interpretation. | 2 |
| **Laboratory Work #3 – Atrial and Ventricular Hypertrophy**<br>ECG criteria for diagnosing hypertrophy of the atria and ventricles; associated clinical contexts. | 2 |
| **Laboratory Work #4 – Cardiac Ischemia**<br>ECG changes indicative of myocardial ischemia, injury, and infarction; interpretation of ST segment and T wave abnormalities. | 2 |
| **Laboratory Work #5 – Paraclinical Diagnosis of Vascular Dysfunction** | 2 |

| Laboratory Syllabus | Hours |
|---|---|
| Investigation of arterial, venous, and capillary systems using clinical and instrumental methods including pulse wave analysis and Doppler techniques. | |
| **Laboratory Work #6 – Investigation of the Respiratory System – Spirometry**<br>Measurement and interpretation of pulmonary volumes and flows; identifying obstructive and restrictive patterns. | 2 |
| **Laboratory Work #7 – Respiratory System – Gasometry, Pulse Oximetry, Chest X-ray**<br>Interpretation of arterial blood gases, pulse oximetry readings, and radiographic imaging of the thorax. | 2 |
| **Laboratory Work #8 – Functional Exploration of the Digestive System – Pancreas and Intestine**<br>Laboratory markers and functional tests used to assess pancreatic enzyme output and intestinal absorption. | 2 |
| **Laboratory Work #9 – Liver Function Tests**<br>Evaluation of hepatic function through biochemical markers; interpretation of transaminases, bilirubin, and other indicators. | 2 |
| **Laboratory Work #10 – Renal Function – Part I**<br>Blood-based assessment of kidney function: urea, creatinine, uric acid; interpretation of clearance tests and nitrogen retention syndromes. | 2 |
| **Laboratory Work #11 – Renal Function – Part II**<br>Urinalysis: macroscopic, microscopic, and chemical evaluation; detection of sediment abnormalities, hematuria, and glucosuria. | 2 |
| **Laboratory Work #12 – Endocrine System Evaluation**<br>Interpretation of hormonal assays; assessing function of thyroid, adrenal, pancreatic, and gonadal axes. | 2 |
| **Laboratory Work #13 – Laboratory Report Interpretation**<br>Hands-on practice with real laboratory results; critical reading and clinical correlation. | 2 |
| **Laboratory Work #14 – Practical Colloquium**<br>Evaluation and review of all practical skills and theoretical knowledge applied throughout the semester. | 2 |

| Minimum References: |
|---|
| **1.** McCance KL, Huether SE, Brashers VL, Rote NS. **Pathophysiology: the biologic basis for disease in adults and children**. 10th ed. St. Louis (MO): Elsevier; 2023. |
| **2.** Copstead-Kirkhorn LC, Banasik JL. **Pathophysiology**. 6th ed. St. Louis (MO): Elsevier; 2020. |
| **3.** Hammer GD, McPhee SJ. **Pathophysiology of disease: an introduction to clinical medicine**. 9th ed. New York: McGraw-Hill Education; 2024. |
| **4.** Kumar V, Abbas AK, Aster JC. **Robbins and Cotran pathologic basis of disease**. 10th ed. Philadelphia: 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** |

| How the information is transmitted | |
|---|---|
| Lecture | • Interactive learning based on logical and progressive presentation of content.<br>• Multimedia projection of lecture materials. |
| 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: |
|---|
| - |

| 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: |
|---|
| • 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 throught the semester | 15 % |
| - Projects / Translations / Posters / Essays, etc. | 15 % |
| - Other activities: | 0 % |

**Description of the actual methods of examination – E**

- Multiple choice examination

| Minimal requirements for grade 5 (or how grade 5 is awarded) | Requirements for grade 10 (or how grade 10 is awarded) |
|---|---|
| • According to the correction scale<br>• At least half of the topics must be correct | • According to the correction scale<br>• At least 90% correct topics |

**Date of completion**
**10.09.2025**

**Discipline Coordinator,**
**Prof. Nemeș Roxana Maria**

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

**Course Coordinator,**
**Prof. Nemeș Roxana Maria**

**Laboratory Coordinator,**
**Prof. Nemeș Roxana Maria**

**Department Approval Date**
**25.09.2025**

**TITU MAIORESCU UNIVERSITY OF BUCHAREST**
**FACULTY OF MEDICINE**
**MEDICINE IN ENGLISH PROGRAM**
**ACADEMIC YEAR: 2025-2026**

# DISCIPLINE FILE

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

| | | | | | | |
|---|---|---|---|---|---|---|
| Discipline`s Name | **CLINICAL PHARMACOLOGY** | | | | | |
| Didactic position, name and surname of the **Discipline Coordinator** | Assoc.Prof. Toma Mihai | | | | | |
| Didactic position, name and surname for the **Course Coordinator** | Assoc.Prof. Toma Mihai | | | | | |
| Didactic position, name and surname for the **Coordinator** of the **Seminar / Laboratory / Clinical Traineeship** | Assoc.prof. Seiman Corina<br>PhD.Dr. Alexiu-Toma Andrada | | | | | |
| Discipline Code | **MLE.3.6.12** | Formative category of the discipline | | **DS** | | |
| Year of Study | **III** | Semester | **6** | Type of the final evaluation (**E, V**) | | **E6** |
| Discipline Regime (**M**-**m**andatory, **E**-**e**lective) | | | | **M** | No. of credits | **3** |

| | | | | | |
|---|---|---|---|---|---|
| No. of Hours per week | **3** | 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 |
| 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 | 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 | CLINICAL PHARMACOLOGY |
|---|---|
| **Specific professional competencies** | C2 – Rational therapeutic management; C4 – Interpretation of clinical pharmacological data. |
| **Transversal competencies** | C6 – Ethical clinical practice; C5 – Communication with patients and team. |
| **General objectives of the discipline** | To provide fundamental knowledge regarding the core scope of Clinical Pharmacology.<br>To develop understanding of clinical assessment and diagnostic reasoning relevant to Clinical Pharmacology.<br>To familiarize students with evidence-based principles, practical applications and patient-safety considerations in Clinical Pharmacology.<br>To establish a foundation for supervised clinical practice, academic reasoning and interdisciplinary collaboration in Clinical Pharmacology. |
| **Specific objectives of the discipline** | Identify common concepts, clinical presentations or practical situations addressed in Clinical Pharmacology.<br>Explain key mechanisms, diagnostic principles and professional standards relevant to Clinical Pharmacology.<br>Interpret essential clinical, laboratory, imaging, histopathological, epidemiological or technological data when applicable.<br>Apply discipline-specific reasoning to formulate appropriate diagnostic, therapeutic, preventive or procedural approaches under supervision.<br>Demonstrate responsible communication, documentation, teamwork and patient-safety awareness in academic and clinical contexts. |

| Learning Outcomes | |
|---|---|
| Knowledge | Explain therapeutic strategies and individualized pharmacological treatment approaches. |
| Skills | Interpret therapeutic indications, adverse reactions and drug interactions in clinical scenarios. |
| Responsabilities/ Autonomy | Apply responsible pharmacological decision-making in patient care. |

| Course Syllabus | Hours |
|---|---|
| **Course #1 – General and Local Anesthesia**<br>Overview of general anesthetics and local anesthetics: mechanisms of action, clinical use, and safety considerations. | 1 |

| Course Syllabus | Hours |
|---|---|
| **Course #2 – Hypnotics, Sedatives, and Psychomotor Stimulants**<br>Agents that influence central nervous system arousal levels; indications, side effects, and therapeutic contexts. | 1 |
| **Course #3 – Central Motor Depressants**<br>Therapeutic approaches in epilepsy, Parkinson's disease, and muscle relaxation; overview of antiepileptics, antiparkinsonian medications, and central myorelaxants. | 1 |
| **Course #4 – Cognitive Function Modulation**<br>Medications influencing cognition and psychiatric conditions: neuroleptics, treatments for Alzheimer's disease, and nootropic agents. | 1 |
| **Course #5 – Affective Disorders – Therapeutic Management**<br>Pharmacological strategies in treating depression, bipolar disorder, and anxiety: antidepressants, mood stabilizers (including lithium), and anxiolytics. | 1 |
| **Course #6 – Opioid Analgesia and Reversal**<br>Pain control using opioid analgesics; mechanisms and indications. Use of opioid antagonists in overdose and dependency management. | 1 |
| **Course #7 – Non-Opioid Pain and Inflammation Control**<br>Management of pain and inflammation using antipyretics, nonsteroidal anti-inflammatory medications, and treatments for gout and rheumatoid arthritis. Includes uricosuric and uric acid synthesis inhibitors, gold compounds, immunosuppressants, anti-TNF-alpha therapies, and more. | 1 |
| **Course #8 – Diabetes Mellitus – Therapeutic Approaches**<br>Management of diabetes using insulin, oral antidiabetic therapies, and glucagon. Mechanisms of action and clinical use. | 1 |
| **Course #9 – Endocrine Therapies**<br>Hormonal treatments for adrenal, thyroid, pituitary, and gonadal disorders. Includes corticosteroids, thyroid regulators, reproductive hormone therapies, and agents targeting endocrine-related pathologies. | 1 |
| **Course #10 – Antibacterial Therapy – Part I**<br>Classification and mechanisms of action of antibacterial medications. Focus on beta-lactams: penicillins, cephalosporins, monobactams, and carbapenems. Overview of resistance mechanisms. | 1 |
| **Course #11 – Antibacterial Therapy – Part II**<br>Further review of antimicrobial agents including sulfonamides, quinolones, macrolides, tetracyclines, aminoglycosides, and agents for tuberculosis and leprosy. Mechanisms, resistance, and clinical applications. | 1 |
| **Course #12 – Antifungal and Antiviral Therapies**<br>Overview of antifungal and antiviral treatments, including those for influenza, herpes, hepatitis, and HIV. Mechanisms of resistance and the role of interferons. | 1 |
| **Course #13 – Cancer Treatment Strategies**<br>Therapies in oncology: types of cytotoxic and cytostatic agents, mechanisms of action, classification, and managing toxicity. | 1 |
| **Course #14 – Antiseptics and Disinfectants**<br>Use of antiseptic and disinfectant agents in clinical settings: mechanisms, indications, and safety profiles. | 1 |

| Laboratory Syllabus | Hours |
|---|---|
| **Laboratory Work #1 – Prescribing Local and General Anesthetics** | 2 |

| Laboratory Syllabus | Hours |
|---|---|
| Practical guidelines for the therapeutic use of local and general anesthetic agents. Indications, methods of administration, and safety considerations. | |
| **Laboratory Work #2 – Central Nervous System – Hypnotics and Sedatives**<br>Prescription practices for hypnotics and sedatives. Evaluation of appropriate use based on clinical context. | 2 |
| **Laboratory Work #3 – Central Nervous System – Anxiolytics and Antipsychotics**<br>Introduction to prescribing anxiolytic and antipsychotic treatments. Case-based application. | 2 |
| **Laboratory Work #4 – Central Nervous System – Antidepressants and Anticonvulsants**<br>Clinical application of antidepressant and anticonvulsant therapies. Key indications and dosage principles. | 2 |
| **Laboratory Work #5 – Pain Management – Opioid Analgesics and Antagonists**<br>Proper prescribing of opioid-based pain treatments and opioid reversal agents. Indications and risk assessment. | 2 |
| **Laboratory Work #6 – Pain and Inflammation – Non-Opioid Therapeutics**<br>Prescribing analgesics, antipyretics, and anti-inflammatory agents. Special considerations in gout and rheumatoid arthritis. | 2 |
| **Laboratory Work #7 – Endocrine and Immune Modulation**<br>Prescribing glucocorticoids, mineralocorticoids, and immunomodulatory therapies. Focus on inflammatory and autoimmune conditions. | 2 |
| **Laboratory Work #8 – Management of Diabetes Mellitus**<br>Therapeutic planning with insulin and oral antidiabetic agents. Glycemic control goals and patient education. | 2 |
| **Laboratory Work #9 – Endocrine Therapy**<br>Practical prescribing of hormone therapies, including thyroid regulators, sex hormones, and other endocrine modulators. | 2 |
| **Laboratory Work #10 – Antibacterial Therapy – Principles of Prescribing**<br>Introduction to antibiotic selection and responsible use based on spectrum, site of infection, and resistance. | 2 |
| **Laboratory Work #11 – Antibacterial Therapy – Continued Practice**<br>Application in case scenarios: penicillins, cephalosporins, aminoglycosides, macrolides, etc. | 2 |
| **Laboratory Work #12 – Antibacterial Therapy – Special Situations**<br>Prescribing in tuberculosis, resistant infections, and complex microbial diseases. Patient monitoring and follow-up. | 2 |
| **Laboratory Work #13 – Review and Exam Preparation**<br>Integrated recap of all topics, therapeutic reasoning practice, and preparation for the practical assessment. | 2 |
| **Laboratory Work #14 – Practical Examination**<br>Assessment of knowledge and application in clinical prescribing situations. | 2 |

**Minimum References:**


1. Katzung BG, Trevor AJ. **Basic and clinical pharmacology**. 15th ed. New York: McGraw-Hill Education; 2021.
2. Rang HP, Ritter JM, Flower RJ, Henderson G. **Rang and Dale's pharmacology**. 9th ed. Edinburgh: Elsevier; 2020.
3. Brunton LL, Hilal-Dandan R, Knollmann BC, editors. **Goodman & Gilman's the pharmacological basis of therapeutics**. 13th ed. New York: McGraw-Hill Education; 2018.
4. Neal MJ. **Medical pharmacology at a glance**. 9th ed. Hoboken (NJ): Wiley-Blackwell; 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** |
|---|
| • |

| **How the information is transmitted** | |
|---|---|
| **Type of Activity** | **Teaching methods used** |
| Lecture | • Interactive learning based on logical and progressive presentation of content.<br>• Multimedia projection of lecture materials. |
| 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:** |
|---|
| - |

| **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:** |
|---|
| • 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 throught the semester | 15 % |
| - Projects / Translations / Posters / Essays, etc. | 15 % |
| - Other activities: | 0 % |

**Description of the actual methods of examination – E**

- Multiple choice examination

| **Minimal requirements for grade 5 (or how grade 5 is awarded)** | **Requirements for grade 10 (or how grade 10 is awarded)** |
|---|---|
| • According to the correction scale<br>• At least half of the topics must be correct | • According to the correction scale<br>• At least 90% correct topics |

**Date of completion**
**09.09.2025**

**Discipline Coordinator,** **Head of Department,**

**Assoc.Prof. Toma Mihai**

**Dan Ulmeanu, Assoc. Professor, M.D., PhD**

**Course Coordinator,**
**Assoc.Prof. Toma Mihai**

**Laboratory Coordinator,**
**Assoc.prof. Seiman Corina**
**PhD.Dr. Alexiu-Toma Andrada**

**Department Approval Date**
**25.09.2025**

**TITU MAIORESCU UNIVERSITY OF BUCHAREST**
**FACULTY OF MEDICINE**
**MEDICINE IN ENGLISH PROGRAM**
**ACADEMIC YEAR: 2025-2026**

# DISCIPLINE FILE

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

| | | | | | | |
|---|---|---|---|---|---|---|
| Discipline`s Name | **SURGICAL MANOEUVRES SKILLS (1ST MODULE)** | | | | | |
| Didactic position, name and surname of the **Discipline Coordinator** | Assoc. Prof. Potecă Teodor Dan | | | | | |
| Didactic position, name and surname for the **Course Coordinator** | Assoc. Prof. Potecă Teodor Dan | | | | | |
| Didactic position, name and surname for the **Coordinator** of the **Seminar / Laboratory / Clinical Traineeship** | Assoc. Prof. Moldovan Alec Cosmin<br>Lect. Kraft Alin Alexandru | | | | | |
| Discipline Code | **MLE.3.6.13** | Formative category of the discipline | | **SS** | | |
| Year of Study | **III** | Semester | **6** | Type of the final evaluation (**E, V**) | | **E6** |
| Discipline Regime (**M**-**m**andatory, **E**-**e**lective) | | | | **M** | No. of credits | **3** |

| | | | | | |
|---|---|---|---|---|---|
| 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 | **75** | Total hours of individual study | **19** |

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

| Distribution of time pool per week | Hours |
|---|---|
| 7. Preparing for different written exams | 0 |
| 8. Preparing for oral examinations | 0 |
| 9. Preparing for the final examination | 2 |
| 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** | SURGICAL MANOEUVRES SKILLS (1ST MODULE) |
|---|---|
| **Specific professional competencies** | C3 – Performance of basic surgical procedures; C2 – Application of technical clinical skills. |
| **Transversal competencies** | C5 – Teamwork; C6 – Professional responsibility. |
| **General objectives of the discipline** | To provide fundamental knowledge regarding the core scope of Surgical manoeuvres skills (1st module).<br>To develop understanding of clinical assessment and diagnostic reasoning relevant to Surgical manoeuvres skills (1st module).<br>To familiarize students with evidence-based principles, practical applications and patient-safety considerations in Surgical manoeuvres skills (1st module).<br>To establish a foundation for supervised clinical practice, academic reasoning and interdisciplinary collaboration in Surgical manoeuvres skills (1st module). |
| **Specific objectives of the discipline** | Identify common concepts, clinical presentations or practical situations addressed in Surgical manoeuvres skills (1st module).<br>Explain key mechanisms, diagnostic principles and professional standards relevant to Surgical manoeuvres skills (1st module).<br>Interpret essential clinical, laboratory, imaging, histopathological, epidemiological or technological data when applicable.<br>Apply discipline-specific reasoning to formulate appropriate diagnostic, therapeutic, preventive or procedural approaches under supervision.<br>Demonstrate responsible communication, documentation, teamwork and patient-safety awareness in academic and clinical contexts. |

| **Learning Outcomes** | |
|---|---|
| Knowledge | Describe principles of asepsis, antisepsis and surgical procedural techniques. |
| Skills | Perform basic surgical manoeuvres including suturing, dressing and sterile techniques. |
| Responsabilities/ Autonomy | Respect safety protocols and infection control standards during procedures. |

| **Course Syllabus** | **Hours** |
|---|---|
| **Course #1. Introduction to Laparoscopic Surgery**<br>Overview of the evolution of laparoscopic techniques, with emphasis on the unique challenges and characteristics of minimally invasive procedures. | 2 |

| Course Syllabus | Hours |
|---|---|
| **Course #2. Laparoscopic Technology and Instrumentation**<br>Presentation of the principles, advantages, and limitations of laparoscopic surgery. Detailed description of laparoscopic apparatus and equipment. | 2 |
| **Course #3. Diagnostic Applications of Laparoscopy**<br>Exploration of the diagnostic role of laparoscopy in liver diseases, abdominal tumors, peritoneal infections, jaundice syndromes, and cancer staging. | 2 |
| **Course #4. Laparoscopic Management of Hiatal Hernias and GERD**<br>Indications, techniques, objectives, and classifications of laparoscopic procedures in gastroesophageal reflux and hiatal hernia repair. | 2 |
| **Course #5. Laparoscopic Treatment of Cardia Achalasia and Vagotomy**<br>Laparoscopic Heller operation for achalasia and the Taylor procedure for vagotomy, including indications and surgical principles. | 2 |
| **Course #6. Laparoscopic Cholecystectomy**<br>Laparoscopic approach to gallbladder lithiasis and non-lithiasic conditions, including complications and their management. | 2 |
| **Course #7. Iatrogenic Injuries of the Biliary Tract**<br>Mechanisms, types, and classifications of common bile duct injuries during laparoscopic cholecystectomy. Overview of laparoscopic repair techniques. | 2 |
| **Course #8. Laparoscopic Treatment of Liver Pathologies**<br>Minimally invasive procedures for managing liver trauma and hepatic abscesses using laparoscopic techniques. | 2 |
| **Course #9. Laparoscopic Appendectomy and Hepatic Hydatid Cyst**<br>Techniques and considerations in laparoscopic removal of the appendix and treatment of hydatid cysts of the liver. | 2 |
| **Course #10. Laparoscopic Surgery for Colorectal Malignancies**<br>Procedures including total laparoscopic mesorectal excision and laparoscopic hemicolectomy. Intraoperative incident management and bleeding control. | 2 |
| **Course #11. Laparoscopic Management of Inguinal Hernias**<br>Principles of hernia repair using prosthetic materials. Anatomical considerations and NYHUS classification for inguino-femoral hernias. | 2 |
| **Course #12. Laparoscopic Management of Stress Urinary Incontinence and Genital Prolapse**<br>Surgical techniques including laparoscopic colpopexia and histeroligamentopexy, addressing pelvic floor disorders. | 2 |
| **Course #13. Laparoscopic Management of Benign Ovarian Cysts**<br>Techniques such as ideal cystectomy and laparoscopic oophorectomy in the treatment of non-malignant ovarian pathologies. | 2 |
| **Course #14. Core Surgical Maneuvers in Laparoscopic Procedures**<br>Essential laparoscopic techniques: pneumoperitoneum creation, vascular injury control, intra- and extracorporeal knot tying, and intraoperative cholangiography. | 2 |

| Laboratory Syllabus | Hours |
|---|---|
| **Laboratory Work #1. Dressings and Bandaging**<br>Hands-on training in the correct technique for applying surgical dressings and wraps, focusing on wound protection and healing support. | 2 |
| **Laboratory Work #2. Asepsis and Antisepsis**<br>Practice of sterilization techniques and prevention of contamination in the surgical field through aseptic and antiseptic protocols. | 2 |

| Laboratory Syllabus | Hours |
|---|---|
| **Laboratory Work #3. Laparoscopic Technique and Diagnostic Laparoscopy**<br>Introduction to technical steps of diagnostic laparoscopy and basic laparoscopic maneuvers, with emphasis on patient safety. | 2 |
| **Laboratory Work #4. Instrumentation in Classical Surgery**<br>Identification and handling of basic surgical instruments used in open (classical) surgical procedures. | 2 |
| **Laboratory Work #5. Instrumentation in Laparoscopic Surgery**<br>Practical familiarization with specialized laparoscopic instruments, including graspers, scissors, and trocars. | 2 |
| **Laboratory Work #6. Laparoscopic Equipment Operation**<br>Training on the use of laparoscopic equipment: visualization systems, signal processors, suction-irrigation devices, insufflators, and electrosurgical units. | 2 |
| **Laboratory Work #7. Wound Closure and Surgical Suturing**<br>Application of various surgical suture techniques and materials, including stitching for skin, soft tissue, and deeper layers. | 2 |
| **Laboratory Work #8. Incision and Drainage Procedures**<br>Simulation of minor surgical procedures such as incision and drainage for abscesses, with focus on technique and asepsis. | 2 |
| **Laboratory Work #9. Vesical Catheterization**<br>Execution of bladder catheterization techniques for urinary drainage, respecting patient comfort and safety. | 2 |
| **Laboratory Work #10. Radiologic Interpretation in Surgery**<br>Interpretation of key radiologic tools in surgery, including x-rays, radioscopy, and cholangiographic studies. | 2 |
| **Laboratory Work #11. Ultrasonographic Interpretation in Surgery**<br>Guided analysis of transabdominal, transvaginal, and venous Doppler ultrasound images for pre- and post-operative evaluation. | 2 |
| **Laboratory Work #12. Surgical Endoscopic Diagnostics**<br>Techniques and interpretation of endoscopic procedures for diagnostic purposes: upper and lower GI endoscopy. | 2 |
| **Laboratory Work #13. Suturing Techniques in Classical Surgery**<br>Practice of classical suture types including aponeurotic, cutaneous, and digestive tract sutures in open surgical procedures. | 2 |
| **Laboratory Work #14. Laparoscopic Suturing Techniques**<br>Execution of intracorporeal and extracorporeal knotting techniques in laparoscopy, including use of mechanical stapling devices. | 2 |

**Minimum References:**


1. **Bailey & Love's short practice of surgery**. 27th ed. Bailey H, Love R, Bulstrode CJK, O'Connell PR, McCaskie AW. Boca Raton (FL): CRC Press; 2023.
2. **Zollinger's atlas of surgical operations**. 11th ed. McAninch JW, Lue TF, editors. New York: McGraw-Hill Education; 2020.
3. **Core topics in general and emergency surgery**. Dehn TCB, Aspinall R. 6th ed. Boca Raton (FL): CRC Press; 2022.
4. **Fundamentals of surgical practice**. Williams NS, Bulstrode CJK, O'Connell PR, editors. 2nd ed. London: CRC Press; 2018.
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 | • Interactive learning based on logical and progressive presentation of content.<br>• Multimedia projection of lecture materials. |
| 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:** |
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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** |
|---|
| - |

| **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 throught the semester | 15 % |
| - Projects / Translations / Posters / Essays, etc. | 15 % |
| - Other activities: | 0 % |

**Description of the actual methods of examination – E**

- Multiple choice examination

| **Minimal requirements for grade 5 (or how grade 5 is awarded)** | **Requirements for grade 10 (or how grade 10 is awarded)** |
|---|---|
| • According to the correction scale<br>• At least half of the topics must be correct | • According to the correction scale<br>• At least 90% correct topics |

**Date of completion**
**12.09.2025**

**Discipline Coordinator,** **Head of Department,**

**Assoc.Prof. Potecă Teodor Dan**

**Dan Ulmeanu, Assoc. Professor, M.D., PhD**

**Course Coordinator,**
**Assoc.Prof. Potecă Teodor Dan**

**Laboratory Coordinator,**
**Assoc.Prof. Moldovan Alec Cosmin**
**Lect. Kraft Alin Alexandru**

**Department Approval Date**
**25.09.2025**

**TITU MAIORESCU UNIVERSITY OF BUCHAREST**
**FACULTY OF MEDICINE**
**MEDICINE IN ENGLISH PROGRAM**
**ACADEMIC YEAR: 2025-2026**

# DISCIPLINE FILE

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

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|---|---|---|---|---|---|---|
| Discipline`s Name | **HYGIENE (II)** | | | | | |
| Didactic position, name and surname of the **Discipline Coordinator** | Prof. Mănăstireanu Dan | | | | | |
| Didactic position, name and surname for the **Course Coordinator** | Prof. Mănăstireanu Dan | | | | | |
| Didactic position, name and surname for the **Coordinator** of the **Seminar / Laboratory / Clinical Traineeship** | Prof. Mănăstireanu Dan | | | | | |
| Discipline Code | **MLE.3.6.14** | Formative category of the discipline | | **DS** | | |
| Year of Study | **III** | Semester | **6** | Type of the final evaluation (**E, V**) | | **E6** |
| Discipline Regime (**M**-**m**andatory, **E**-**e**lective) | | | | **M** | No. of credits | **2** |

| | | | | | |
|---|---|---|---|---|---|
| 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** | HYGIENE (II) |
|---|---|
| **Specific professional competencies** | C1 – Identification of epidemiological determinants; C4 – Application of prevention strategies. |
| **Transversal competencies** | C5 – Communication in public health; C6 – Social responsibility. |
| **General objectives of the discipline** | To provide fundamental knowledge regarding the core scope of Hygiene (II).<br>To develop understanding of clinical assessment and diagnostic reasoning relevant to Hygiene (II).<br>To familiarize students with evidence-based principles, practical applications and patient-safety considerations in Hygiene (II).<br>To establish a foundation for supervised clinical practice, academic reasoning and interdisciplinary collaboration in Hygiene (II). |
| **Specific objectives of the discipline** | Identify common concepts, clinical presentations or practical situations addressed in Hygiene (II).<br>Explain key mechanisms, diagnostic principles and professional standards relevant to Hygiene (II).<br>Interpret essential clinical, laboratory, imaging, histopathological, epidemiological or technological data when applicable.<br>Apply discipline-specific reasoning to formulate appropriate diagnostic, therapeutic, preventive or procedural approaches under supervision.<br>Demonstrate responsible communication, documentation, teamwork and patient-safety awareness in academic and clinical contexts. |

| **Learning Outcomes** | |
|---|---|
| Knowledge | Explain advanced principles of environmental health and epidemiology. |
| Skills | Analyze epidemiological data and apply preventive health strategies. |
| Responsabilities/ Autonomy | Promote disease prevention programs and public health interventions. |

| Course Syllabus | Hours |
|---|---|
| **Course #1 – Introduction to Hygiene and Prophylaxis**<br>Foundations of hygiene as a medical science. Concepts of environmental hygiene, disease prevention, and public health prophylaxis. | 1 |
| **Course #2 – Air Hygiene**<br>Factors affecting air quality and its impact on health. Methods of monitoring and controlling air pollution in various environments. | 2 |

| Course Syllabus | Hours |
|---|---|
| **Course #3 – Water Hygiene and Waterborne Diseases**<br>Water as a public health factor. Hygiene of drinking water. Sources and prevention of waterborne diseases. Standards and quality control. | 2 |
| **Course #4 – Soil Hygiene and Health Implications**<br>Hygienic importance of soil in relation to health. Sources of contamination, sanitation methods, and prevention of disease transmission through soil. | 2 |
| **Course #5 – Radiation Hygiene and Medical Applications**<br>Types of radiation and their health effects. Principles of radiation protection. Use of radiation in diagnosis and treatment in medical settings. | 2 |
| **Course #6 – Habitat Hygiene and Microclimate**<br>Assessment of living environments, with focus on thermal comfort, humidity, ventilation, and light. Special aspects of hygiene for different age groups. | 2 |
| **Course #7 – Sanitary Hygiene**<br>Sanitary measures in public institutions, food services, and waste management. Prevention against communicable diseases through sanitation. | 2 |
| **Course #8 – Medical Legislation**<br>Overview of Romanian health legislation and its alignment with European Union standards in hygiene and environmental health. | 1 |

| Laboratory Syllabus | Hours |
|---|---|
| **Laboratory Work #1 – Laboratory Safety in Hygiene Practice**<br>Workplace protection measures and protocols in the hygiene laboratory. Proper use of equipment and personal protective gear. | 2 |
| **Laboratory Work #2 – Hygiene Research Methods**<br>Overview of specific methods used in hygiene analysis. Data collection, environmental sampling, and interpretation of hygiene indicators. | 2 |
| **Laboratory Work #3 – Water Potability Assessment**<br>Determination of bacteriological and chemical indicators of potable water. Standards of safety and practical testing procedures. | 2 |
| **Laboratory Work #4 – Evaluation of Pollutant Limits (CMA Values)**<br>Understanding CMA (Maximum Admissible Concentration) values for air, water, and soil. Assessment of the body's responses to various pollutants including irritants, asphyxiants, toxic and fibrogenic agents. | 2 |
| **Laboratory Work #5 – Air Pollution and Public Health**<br>Investigation of sources and types of air pollution. Impact of smoking and bacteriological contamination of indoor and outdoor air. | 2 |
| **Laboratory Work #6 – Radiation Use in Hygiene**<br>Practical applications and safety considerations for the use of radiation in hygiene and medicine. Protective measures and monitoring techniques. | 2 |
| **Laboratory Work #7 – Microclimate Analysis**<br>Assessment of microclimatic factors (temperature, humidity, ventilation, etc.) and their effect on comfort and productivity. Balancing health needs and economic efficiency in indoor environments. | 2 |

| Minimum References: |
|---|
| **1.** Friis RH. **Essentials of environmental health**. 3rd ed. Burlington (MA): Jones & Bartlett Learning; 2021. |
| **2.** World Health Organization. **Environmental health**. Geneva: World Health Organization; 2020. |

| **Minimum References:** |
|---|
| **3.** Gordis L. **Epidemiology**. 6th ed. Philadelphia: Elsevier; 2020. |
| **4.** Stanhope M, Lancaster J. **Public health nursing: population-centered health care in the community**. 10th ed. St. Louis (MO): 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** |
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| • |

| **How the information is transmitted** | |
|---|---|
| **Type of Activity** | **Teaching methods used** |
| Lecture | • Interactive learning based on logical and progressive presentation of content.<br>• Multimedia projection of lecture materials. |
| 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:** |
|---|
| - |

| **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:** |
|---|
| • 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 throught the semester | 15 % |
| - Projects / Translations / Posters / Essays, etc. | 15 % |
| - Other activities: | 0 % |

**Description of the actual methods of examination – E**

- Multiple choice examination

| **Minimal requirements for grade 5 (or how grade 5 is awarded)** | **Requirements for grade 10 (or how grade 10 is awarded)** |
|---|---|
| • According to the correction scale<br>• At least half of the topics must be correct | • According to the correction scale<br>• At least 90% correct topics |

**Date of completion**
**15.09.2025**

**Discipline Coordinator,**
**Prof. Mănăstireanu Dan**

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

**Course Coordinator,**
**Prof. Mănăstireanu Dan**

**Laboratory Coordinator,**
**Prof. Mănăstireanu Dan**

**Department Approval Date**
**25.09.2025**

**TITU MAIORESCU UNIVERSITY OF BUCHAREST**
**FACULTY OF MEDICINE**
**MEDICINE IN ENGLISH PROGRAM**
**ACADEMIC YEAR: 2025-2026**

# DISCIPLINE FILE

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

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|---|---|---|---|---|---|---|
| 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** | Prof. Nemeș Roxana Maria<br>Assist. Iorgescu Andreea | | | | | |
| Discipline Code | **MLE.3.6.15** | Formative category of the discipline | | **SS** | | |
| Year of Study | **III** | Semester | **6** | Type of the final evaluation (**E, V**) | | **V6** |
| Discipline Regime (**M**-**m**andatory, **E**-**e**lective) | | | | **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 |
| 6. Homework, translations, etc. | 0 |

| Distribution of time pool per week | Hours |
|---|---|
| 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** | C3 – Development of practical clinical skills; C2 – Application of theoretical knowledge in practice. |
| **Transversal competencies** | C5 – Teamwork; C6 – Professional ethics. |
| **General objectives of the discipline** | To provide fundamental knowledge regarding the core scope of Yearly Medical Practice for acquiring medical skills and competences *.<br>To develop understanding of clinical assessment and diagnostic reasoning relevant to Yearly Medical Practice for acquiring medical skills and competences *.<br>To familiarize students with evidence-based principles, practical applications and patient-safety considerations in Yearly Medical Practice for acquiring medical skills and competences *.<br>To establish a foundation for supervised clinical practice, academic reasoning and interdisciplinary collaboration in Yearly Medical Practice for acquiring medical skills and competences *. |
| **Specific objectives of the discipline** | Identify common concepts, clinical presentations or practical situations addressed in Yearly Medical Practice for acquiring medical skills and competences *.<br>Explain key mechanisms, diagnostic principles and professional standards relevant to Yearly Medical Practice for acquiring medical skills and competences *.<br>Interpret essential clinical, laboratory, imaging, histopathological, epidemiological or technological data when applicable.<br>Apply discipline-specific reasoning to formulate appropriate diagnostic, therapeutic, preventive or procedural approaches under supervision.<br>Demonstrate responsible communication, documentation, teamwork and patient-safety awareness in academic and clinical contexts. |

| **Learning Outcomes** | |
|---|---|
| Knowledge | Describe the organization of clinical activity and principles of patient management. |
| Skills | Apply theoretical knowledge during clinical practice and participate in patient care activities. |
| Responsabilities/ Autonomy | Demonstrate professional responsibility and ethical conduct in clinical environments. |

| Laboratory Syllabus | Hours |
|---|---|
| **Laboratory Work #1. Medical Language and Patient Handling**<br>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**<br>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**<br>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**<br>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.
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 | • |

| How the information is transmitted | |
|---|---|
| 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: |
|---|
| • |

| 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 throught the semester | 10 % |
| - Projects / Translations / Posters / Essays, etc. | - |
| - Other activities: | 5 % |

| Description of the actual methods of examination – E | |
|---|---|
| • | |
| **Minimal requirements for grade 5 (or how grade 5 is awarded)** | **Requirements for grade 10 (or how grade 10 is awarded)** |
| • | • |

**Date of completion**
**09.09.2025**

**Discipline Coordinator,**

**-**

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

**Course Coordinator,**

**-**

**Laboratory Coordinator,**
**Prof. Nemeș Roxana Maria**
**Assist. Iorgescu Andreea**

**Department Approval Date**
**25.09.2025**

**TITU MAIORESCU UNIVERSITY OF BUCHAREST**
**FACULTY OF MEDICINE**
**MEDICINE IN ENGLISH PROGRAM**
**ACADEMIC YEAR: 2025-2026**

# DISCIPLINE FILE

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

| | | | | | |
|---|---|---|---|---|---|
| Discipline`s Name | **PRACTICAL SKILLS INTERNSHIP** | | | | |
| 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** | Lect. Parlițeanu Oana | | | | |
| Discipline Code | **MLE.3.6.16** | Formative category of the discipline | | **SS** | |
| Year of Study | **III** | Semester | **6** | Type of the final evaluation (**E, V**) | **V6** |
| Discipline Regime (**M**-**m**andatory, **E**-**e**lective) | | | **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 | **120** | Out of which are Course hours: | - | Seminar / Practical Activity / Clinical Stage | **120** |
| | | Total hours per semester | **120** | 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 |
| 6. Homework, translations, etc. | 0 |

| Distribution of time pool per week | Hours |
|---|---|
| 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 | 120 |
| 12. Documentation from web sources, portals, wiki websites | 0 |
| 13. Tutoring | 0 |
| 14. Examinations | 0 |
| 15. Other activities: | 0 |

| **Course name** | PRACTICAL SKILLS INTERNSHIP** |
|---|---|
| **Specific professional competencies** | C3 – Practical clinical skills development; C4 – Application of evidence-based practice. |
| **Transversal competencies** | C5 – Communication with healthcare team; C6 – Professional conduct. |
| **General objectives of the discipline** | To provide fundamental knowledge regarding the core scope of Practical skills internship**.<br>To develop understanding of clinical assessment and diagnostic reasoning relevant to Practical skills internship**.<br>To familiarize students with evidence-based principles, practical applications and patient-safety considerations in Practical skills internship**.<br>To establish a foundation for supervised clinical practice, academic reasoning and interdisciplinary collaboration in Practical skills internship**. |
| **Specific objectives of the discipline** | Identify common concepts, clinical presentations or practical situations addressed in Practical skills internship**.<br>Explain key mechanisms, diagnostic principles and professional standards relevant to Practical skills internship**.<br>Interpret essential clinical, laboratory, imaging, histopathological, epidemiological or technological data when applicable.<br>Apply discipline-specific reasoning to formulate appropriate diagnostic, therapeutic, preventive or procedural approaches under supervision.<br>Demonstrate responsible communication, documentation, teamwork and patient-safety awareness in academic and clinical contexts. |

| **Learning Outcomes** | |
|---|---|
| Knowledge | Understand clinical procedures and protocols applied in healthcare settings. |
| Skills | Perform practical clinical procedures under supervision and document clinical activities. |
| Responsabilities/ Autonomy | Demonstrate autonomy, responsibility and professional behavior in patient care. |

| **Practical Activity Syllabus** | **Hours** |
|---|---|
| **Practical Activity #1.Medical Duty – Session 1: Organization of the Medical Shift Service**<br>Overview of emergency department structure, protocols, responsibilities, and workflow during on-call shifts. | 8 |

| Practical Activity Syllabus | Hours |
|---|---|
| **Practical Activity #2. Medical Duty – Session 2: Organization of the Medical Shift Service**<br>Continuation of the structural and procedural framework, including communication strategies and documentation standards. | 8 |
| **Practical Activity #3. Medical Duty – Session 3: Patient Management in the Emergency Room**<br>Initial evaluation and condition-specific management of medical patients presenting to the emergency department. | 8 |
| **Practical Activity #4. Medical Duty – Session 4: Patient Management in the Emergency Room**<br>Further practice in patient triage and stabilization according to clinical presentation and urgency. | 8 |
| **Practical Activity #5. Medical Duty – Session 5: Patient Management in the Emergency Room**<br>Application of protocols for acute cases involving cardiovascular, respiratory, and metabolic disturbances. | 8 |
| **Practical Activity #6. Medical Duty – Session 6: Basic Techniques in the Emergency Department (I)**<br>Clinical examination, cardiopulmonary assessment, pulse oximetry, and non-invasive blood pressure measurement. | 8 |
| **Practical Activity #7. Medical Duty – Session 7: Basic Techniques in the Emergency Department (II)**<br>Peripheral venipuncture, venous catheter placement, blood collection, urinary catheterization, nasogastric tube insertion, and oxygen therapy. | 8 |
| **Practical Activity #8. Medical Duty – Session 8: Core Clinical Emergency Techniques (I)**<br>Comprehensive emergency clinical examination, abdominal and respiratory assessment, and interpretation of laboratory and imaging data. | 8 |
| **Practical Activity #9. Medical Duty – Session 9: Core Clinical Emergency Techniques (II)**<br>Reinforcement and repetition of core techniques, with focus on urgent diagnostic evaluation and patient monitoring. | 8 |
| **Practical Activity #10. Medical Duty – Session 10: Core Clinical Emergency Techniques (III)**<br>Continued training in emergency clinical assessments and diagnostic reasoning based on lab and imaging results. | 8 |
| **Practical Activity #11. Surgical Duty – Session 1: Organization of the Surgical Shift Department**<br>Structure and operation of the surgical on-call service. Triage, emergency case flow, and coordination within surgical teams. | 8 |
| **Practical Activity #12. Surgical Duty – Session 2: Acute Surgical Patient Management**<br>Initial evaluation and stabilization of acute surgical patients presenting to the emergency department. | 8 |
| **Practical Activity #13. Surgical Duty – Session 3: Basic Emergency Surgical Techniques**<br>Urinary and nasogastric catheterization, fluid resuscitation, oxygen therapy, shock management, and intravenous analgesia. | 8 |
| **Practical Activity #14. Surgical Duty – Session 4: Basic Life Support (BLS)**<br>Introduction and application of BLS protocols in surgical emergencies, including airway, breathing, and circulation support. | 8 |
| **Practical Activity #15. Surgical Duty – Session 5: Clinical Examination in Acute Surgical Cases**<br>Systematic clinical assessment of surgical patients: abdominal, thoracic, cardiovascular, and orthopedic examinations. | 8 |

| 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. |
| **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 | • |
| 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: |
|---|
| • |

| 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 throught the semester | 10 % |
| - Projects / Translations / Posters / Essays, etc. | - |

| | |
|---|---|
| - Other activities: | 5 % |
| | |
| **Description of the actual methods of examination – E** | |
| • | |
| **Minimal requirements for grade 5 (or how grade 5 is awarded)** | **Requirements for grade 10 (or how grade 10 is awarded)** |
| • | • |

**Date of completion**
**11.09.2025**

**Discipline Coordinator,**

**-**

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

**Course Coordinator,**
**-**

**Laboratory Coordinator,**
**Lect. Parlițeanu Oana**

**Department Approval Date**
**25.09.2025**

**TITU MAIORESCU UNIVERSITY OF BUCHAREST**
**FACULTY OF MEDICINE**
**MEDICINE IN ENGLISH PROGRAM**
**ACADEMIC YEAR: 2025-2026**

# DISCIPLINE FILE

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

| | | | | | | |
|---|---|---|---|---|---|---|
| Discipline`s Name | **CLINICAL ANATOMY** | | | | | |
| Didactic position, name and surname of the **Discipline Coordinator** | Assoc.Prof. Potecă Teodor Dan | | | | | |
| Didactic position, name and surname for the **Course Coordinator** | Assoc.Prof. Potecă Teodor Dan | | | | | |
| Didactic position, name and surname for the **Coordinator** of the **Seminar / Laboratory / Clinical Traineeship** | - | | | | | |
| Discipline Code | **MLE.O.6** | Formative category of the discipline | | **DS** | | |
| Year of Study | **III** | Semester | **6** | Type of the final evaluation (**E, V**) | | **V6** |
| Discipline Regime (**M**-**m**andatory, **E**-**e**lective) | | | | **E** | 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 |
| 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 | 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 | CLINIC ANATOMY |
|---|---|
| **Specific professional competencies** | C1 – Identification of anatomical structures relevant to clinical practice;<br>C2 – Integration of anatomical knowledge in diagnostic reasoning. |
| **Transversal competencies** | C4 – Analytical thinking in clinical interpretation; C6 – Professional responsibility in medical practice. |
| **General objectives of the discipline** | To provide fundamental knowledge regarding the core scope of Clinic Anatomy.<br>To develop understanding of clinical assessment and diagnostic reasoning relevant to Clinic Anatomy.<br>To familiarize students with evidence-based principles, practical applications and patient-safety considerations in Clinic Anatomy.<br>To establish a foundation for supervised clinical practice, academic reasoning and interdisciplinary collaboration in Clinic Anatomy. |
| **Specific objectives of the discipline** | Identify common concepts, clinical presentations or practical situations addressed in Clinic Anatomy.<br>Explain key mechanisms, diagnostic principles and professional standards relevant to Clinic Anatomy.<br>Interpret essential clinical, laboratory, imaging, histopathological, epidemiological or technological data when applicable.<br>Apply discipline-specific reasoning to formulate appropriate diagnostic, therapeutic, preventive or procedural approaches under supervision.<br>Demonstrate responsible communication, documentation, teamwork and patient-safety awareness in academic and clinical contexts. |

| Learning Outcomes | |
|---|---|
| Knowledge | Describe the anatomical organization of organs and anatomical regions with clinical relevance and explain the topographical relationships between structures involved in medical and surgical procedures. |
| Skills | Identify anatomical landmarks on the living subject, medical images and anatomical models; correlate anatomical structures with diagnostic and therapeutic procedures. |
| Responsabilities/ Autonomy | Apply anatomical knowledge responsibly in clinical reasoning and support safe clinical or surgical procedures under supervision. |

| Course Syllabus | Hours |
|---|---|
| **Course #1. Introduction to Clinical Anatomy**<br>Definition and purpose of clinical anatomy. Emphasis on the individuality of the human body and variation in anatomical structures. Interpretation and retention of information from | 2 |

| Course Syllabus | Hours |
|---|---|
| clinical and paraclinical investigations. Differences between desmal and encondral bone development. | |
| **Course #2. Clinical Anatomy of Joints and Soft Tissues**<br>Examination of joints, muscles, fasciae, and synovial bursae. Functional and relaxation positions. Principles of articular biomechanics. Pathological deformities and clinical syndromes involving anatomical channels. | 2 |
| **Course #3. Clinical Anatomy of the Vascular and Lymphatic Systems**<br>Structure and function of arteries, veins, and lymph nodes. Collateral circulation and lymphatic drainage territories. Clinical significance of these pathways in diagnosis and treatment. | 2 |
| **Course #4. Clinical Anatomy of Nerves, Meninges, and Endocrine Glands**<br>Overview of cranial and spinal nerves, referred and radiating pain. Meningeal anatomy with relevance to intracranial hemorrhage and meningitis. Clinical perspectives on the pituitary, epiphysis, thyroid, parathyroids, and adrenal glands. | 2 |
| **Course #5. Clinical Anatomy of the Thoracic Region**<br>Anatomy of the chest wall and breast region, pleuropulmonary spaces, and mediastinum. Anatomical correlations with current imaging techniques used to explore the heart and great vessels. | 2 |
| **Course #6. Clinical Anatomy of the Abdomino-Pelvic Region**<br>Study of the antero-lateral abdominal wall, lumbar area, and perineum. The diaphragms of the abdomino-pelvic region. Surface anatomy and skin projections. Analysis of the rectal ampulla and sphincters in digestive tract function. | 2 |
| **Course #7. Clinical Anatomy of Congenital Malformations**<br>Overview of common congenital anomalies and their anatomical foundations. Correlation with clinical diagnostics and surgical/interventional treatment approaches. | 2 |

| Minimum References: |
|---|
| **1.** Drake RL, Vogl W, Mitchell AWM. **Gray's anatomy for students**. 5th ed. Philadelphia: Elsevier; 2020. |
| **2.** Moore KL, Dalley AF, Agur AMR. **Clinically oriented anatomy**. 8th ed. Philadelphia: Wolters Kluwer; 2018. |
| **3.** Moore KL, Agur AMR, Dalley AF. **Essential clinical anatomy**. 6th ed. Philadelphia: Wolters Kluwer; 2022. |
| **4.** Ellis H. **Clinical anatomy**. 13th ed. Oxford: Wiley-Blackwell; 2018. |
| **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 | • Interactive learning based on logical and progressive presentation of content.<br>• Multimedia projection of lecture materials. |
| 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:** |
|---|
| - |

| **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:** |
|---|
| • 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 throught the semester | 15 % |
| - Projects / Translations / Posters / Essays, etc. | 15 % |
| - Other activities: | 0 % |

**Description of the actual methods of examination – E**

- Multiple choice examination

| **Minimal requirements for grade 5 (or how grade 5 is awarded)** | **Requirements for grade 10 (or how grade 10 is awarded)** |
|---|---|
| • According to the correction scale<br>• At least half of the topics must be correct | • According to the correction scale<br>• At least 90% correct topics |

**Date of completion**
**10.09.2025**

**Discipline Coordinator,**
**Assoc.Prof. Potecă Teodor Dan**

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

**Course Coordinator,**
**Assoc.Prof. Potecă Teodor Dan**

**Laboratory Coordinator,**
**-**

**Department Approval Date**
**25.09.2025**

**TITU MAIORESCU UNIVERSITY OF BUCHAREST**
**FACULTY OF MEDICINE**
**MEDICINE IN ENGLISH PROGRAM**
**ACADEMIC YEAR: 2025-2026**

# DISCIPLINE FILE

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

| | | | | | | |
|---|---|---|---|---|---|---|
| Discipline`s Name | **NEUROBIONICS** | | | | | |
| Didactic position, name and surname of the **Discipline Coordinator** | Assoc. Prof. Ciurea Jean, MD, PhD | | | | | |
| Didactic position, name and surname for the **Course Coordinator** | Assoc. Prof. Ciurea Jean, MD, PhD | | | | | |
| Didactic position, name and surname for the **Coordinator** of the **Seminar / Laboratory / Clinical Traineeship** | - | | | | | |
| Discipline Code | **MLE.O.7** | Formative category of the discipline | | **CS** | | |
| Year of Study | **III** | Semester | **6** | Type of the final evaluation (**E, V**) | | **V6** |
| Discipline Regime (**M**-**m**andatory, **E**-**e**lective) | | | | **E** | 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 |
| 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 | 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** | NEUROBIONICS |
|---|---|
| **Specific professional competencies** | C2 – Application of biomedical technologies in neurological conditions;<br>C4 – Interpretation of technological data in medical context. |
| **Transversal competencies** | C4 – Scientific reasoning and innovation; C5 – Interdisciplinary collaboration. |
| **General objectives of the discipline** | To provide fundamental knowledge regarding the core scope of Neurobionics.<br>To develop understanding of clinical assessment and diagnostic reasoning relevant to Neurobionics.<br>To familiarize students with evidence-based principles, practical applications and patient-safety considerations in Neurobionics.<br>To establish a foundation for supervised clinical practice, academic reasoning and interdisciplinary collaboration in Neurobionics. |
| **Specific objectives of the discipline** | Identify common concepts, clinical presentations or practical situations addressed in Neurobionics.<br>Explain key mechanisms, diagnostic principles and professional standards relevant to Neurobionics.<br>Interpret essential clinical, laboratory, imaging, histopathological, epidemiological or technological data when applicable.<br>Apply discipline-specific reasoning to formulate appropriate diagnostic, therapeutic, preventive or procedural approaches under supervision.<br>Demonstrate responsible communication, documentation, teamwork and patient-safety awareness in academic and clinical contexts. |

| **Learning Outcomes** | |
|---|---|
| Knowledge | Explain the principles of neurobiology, neuroengineering and bioelectronic interfaces applied in medical technologies for neurological disorders. |
| Skills | Analyze the functioning of neuroprosthetic devices and interpret the interaction between neural systems and biomedical technologies. |
| Responsabilities/ Autonomy | Integrate interdisciplinary knowledge from neuroscience and biomedical engineering in evaluating innovative therapeutic technologies. |

| **Course Syllabus** | **Hours** |
|---|---|
| **Course #1. Introduction to Neurobionics**<br>Understanding the cell membrane, resting potential, depolarization, hyperpolarization, and pacemaker automatism. Overview of fundamental neurophysiological concepts. | 2 |

| Course Syllabus | Hours |
|---|---|
| **Course #2. Synapses and Neurotransmission**<br>Exploration of peripheral and central synapses, both chemical and electrical. Role of neurotransmitters in synaptic transmission. Discussion on neurological conditions like epilepsy, motility disorders, Parkinson's disease, dystonia, and neuromodulation. | 2 |
| **Course #3. Sensitivity and Pain Management**<br>Examining sensory functions, pain perception, and modern techniques for pain control. Addressing depression and approaches for managing its effects on the nervous system. | 2 |
| **Course #4. Epilepsy and Bruxism**<br>Detailed study of epilepsy, including its causes, manifestations, and management. Examination of bruxism and its neurological implications. | 2 |
| **Course #5. Sensory Perception: Vision and Hearing**<br>The anatomy and physiology of vision and hearing. Understanding prosthetics and their role in sensory restoration. Study of tinnitus and its management. | 2 |
| **Course #6. Balance and Movement Harmony**<br>Exploring the concept of balance and its relationship to coordinated movement. Walking, running, dancing, and playing music as forms of movement. Analysis of the role of the inner ear in balance and dizziness. Comparison of gyro sensors with inner ear dynamics. | 2 |
| **Course #7. Brain-Machine Interface**<br>Introduction to the concept of brain-machine interfaces, focusing on communication, language, and song. Exploration of biophotons and brain augmentation technologies that enhance cognitive functions. | 2 |

| Minimum References: |
|---|
| **1.** He B, editor. **Neural engineering**. 2nd ed. Cham: Springer; 2020. |
| **2.** He B, editor. **Springer handbook of neural engineering**. Cham: Springer; 2023. |
| **3.** Kandel ER, Koester JD, Mack SH, Siegelbaum SA. **Principles of neural science**. 6th ed. New York: McGraw-Hill Education; 2021. |
| **4.** Wolpaw JR, Wolpaw EW, editors. **Brain–computer interfaces: principles and practice**. 2nd ed. Oxford: Oxford University Press; 2018. |
| **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 | • Interactive learning based on logical and progressive presentation of content.<br>• Multimedia projection of lecture materials. |
| 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: |
|---|
| - |

| **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:** |
|---|
| • 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 throught the semester | 15 % |
| - Projects / Translations / Posters / Essays, etc. | 15 % |
| - Other activities: | 0 % |

**Description of the actual methods of examination – E**

- Multiple choice examination

| **Minimal requirements for grade 5 (or how grade 5 is awarded)** | **Requirements for grade 10 (or how grade 10 is awarded)** |
|---|---|
| • According to the correction scale<br>• At least half of the topics must be correct | • According to the correction scale<br>• At least 90% correct topics |

**Date of completion**
**16.09.2025**

**Discipline Coordinator,**
**Assoc.Prof. Ciurea Jean**

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

**Course Coordinator,**
**Assoc.Prof. Ciurea Jean**

**Laboratory Coordinator,**
**-**

**Department Approval Date**
**25.09.2025**

**TITU MAIORESCU UNIVERSITY OF BUCHAREST**
**FACULTY OF MEDICINE**
**MEDICINE IN ENGLISH PROGRAM**
**ACADEMIC YEAR: 2025-2026**

# DISCIPLINE FILE

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

| | | | | | | |
|---|---|---|---|---|---|---|
| Discipline`s Name | **PRINCIPLES AND PRACTICES IN PAIN THERAPY** | | | | | |
| Didactic position, name and surname of the **Discipline Coordinator** | Assoc. Prof. Gorecki Gabriel Petre, MD, PhD | | | | | |
| Didactic position, name and surname for the **Course Coordinator** | Assoc. Prof. Gorecki Gabriel Petre, MD, PhD | | | | | |
| 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 | **III** | Semester | **6** | Type of the final evaluation (**E, V**) | | **V6** |
| Discipline Regime (**M**-**m**andatory, **E**-**e**lective) | | | | **E** | 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 |
| 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 | 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 | PRINCIPLES AND PRACTICE IN PAIN THERAPY |
|---|---|
| **Specific professional competencies** | C2 – Application of therapeutic strategies in pain management; C3 – Clinical evaluation of patient symptoms. |
| **Transversal competencies** | C5 – Communication with patients regarding pain management; C6 – Ethical responsibility in patient care. |
| **General objectives of the discipline** | To provide fundamental knowledge regarding the core scope of Principles and practice in Pain Therapy.<br>To develop understanding of clinical assessment and diagnostic reasoning relevant to Principles and practice in Pain Therapy.<br>To familiarize students with evidence-based principles, practical applications and patient-safety considerations in Principles and practice in Pain Therapy.<br>To establish a foundation for supervised clinical practice, academic reasoning and interdisciplinary collaboration in Principles and practice in Pain Therapy. |
| **Specific objectives of the discipline** | Identify common concepts, clinical presentations or practical situations addressed in Principles and practice in Pain Therapy.<br>Explain key mechanisms, diagnostic principles and professional standards relevant to Principles and practice in Pain Therapy.<br>Interpret essential clinical, laboratory, imaging, histopathological, epidemiological or technological data when applicable.<br>Apply discipline-specific reasoning to formulate appropriate diagnostic, therapeutic, preventive or procedural approaches under supervision.<br>Demonstrate responsible communication, documentation, teamwork and patient-safety awareness in academic and clinical contexts. |

| Learning Outcomes | |
|---|---|
| Knowledge | Describe the physiological and pathophysiological mechanisms of acute and chronic pain and explain pharmacological and non-pharmacological pain management strategies. |
| Skills | Assess pain using standardized clinical scales and apply therapeutic approaches for pain control. |
| Responsabilities/ Autonomy | Participate responsibly in multidisciplinary pain management strategies and monitor treatment effectiveness under supervision. |

| Course Syllabus | Hours |
|---|---|
| **Course #1. Definition of Pain. Characteristics of Acute and Chronic Pain**<br>Fundamental definitions of pain according to current standards (e.g., IASP). Clinical and pathophysiological distinctions between acute and chronic pain. | 1 |
| **Course #2. Physiological and Pathophysiological Mechanisms of Pain I**<br>Overview of nociception: nociceptors, peripheral pathways, spinal processing. Introduction to pain signaling and modulation at the peripheral level. | 1 |
| **Course #3. Physiological and Pathophysiological Mechanisms of Pain II**<br>Central processing of pain: ascending and descending pathways, sensitization, and neuroplasticity in chronic pain states. | 1 |
| **Course #4. Factors Influencing Pain Intensity and Individual Response**<br>Biological, psychological, social, and cultural factors affecting pain perception and variability in therapeutic outcomes. | 1 |
| **Course #5. Acute and Chronic Pain: Similarities and Differences**<br>Comparative clinical features, underlying mechanisms, and implications for diagnosis and treatment strategies. | 1 |
| **Course #6. Pain Assessment. Pain Rating Scales**<br>Clinical tools for evaluating pain intensity and quality: VAS, NRS, McGill Pain Questionnaire, DN4, and their applications. | 1 |
| **Course #7. Therapeutic Principles in Acute Pain**<br>Management strategies, pharmacological approaches, surgical and procedural interventions for acute pain relief. | 1 |
| **Course #8. Therapeutic Principles in Chronic Pain**<br>Long-term pain management approaches including pharmacologic, interventional, psychological, and rehabilitative strategies. | 1 |
| **Course #9. Pharmacological Analgesic Techniques: Non-Opioid Analgesics**<br>Mechanisms, indications, contraindications, and clinical use of NSAIDs, acetaminophen, and adjuvants. | 1 |
| **Course #10. Pharmacological Analgesic Techniques: Opioid Analgesics**<br>Pharmacodynamics, therapeutic indications, risk management, side effects, and opioid stewardship. | 1 |
| **Course #11. Non-Pharmacological Analgesic Techniques**<br>Physical therapy, cognitive-behavioral interventions, acupuncture, neuromodulation, and interventional procedures. | 1 |
| **Course #12. Multimodal Analgesia**<br>Concept, rationale, and clinical applications of combining multiple therapeutic modalities to optimize pain control and minimize side effects. | 1 |
| **Course #13. Therapeutic Failure: Clinical Scenarios and Management Strategies**<br>Causes of inadequate pain control, strategies for reassessment, multidisciplinary approaches, and individualized treatment adaptation. | 1 |
| **Course #14. Current Research and Future Directions in Pain Management**<br>Recent advances in pain neuroscience, emerging therapies, personalized pain medicine, and ongoing clinical trials. | 1 |

**Minimum References:**


1. Raja SN, Carr DB, Cohen M, Finnerup NB, Flor H, Gibson S, et al., editors. **Pain medicine: an essential review**. Oxford: Oxford University Press; 2021.

| **Minimum References:** |
|---|
| **2.** Deer TR, Leong MS, Ray AL, Kim C, editors. **Comprehensive treatment of chronic pain by medical, interventional, and integrative approaches**. New York: Springer; 2020. |
| **3.** Fishman SM, Ballantyne JC, Rathmell JP, editors. **Bonica's management of pain**. 5th ed. Philadelphia: Wolters Kluwer; 2018. |
| **4.** Wall PD, Melzack R, editors. **Wall & Melzack's textbook of pain**. 6th ed. Philadelphia: Elsevier; 2018. |
| **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 | • Interactive learning based on logical and progressive presentation of content.<br>• Multimedia projection of lecture materials. |
| 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:** |
|---|
| - |

| **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:** |
|---|
| • 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 throught the semester | 15 % |
| - Projects / Translations / Posters / Essays, etc. | 15 % |
| - Other activities: | 0 % |
| | |
| **Description of the actual methods of examination – E** | |
| • Multiple choice examination | |

| Minimal requirements for grade 5<br>(or how grade 5 is awarded) | Requirements for grade 10<br>(or how grade 10 is awarded) |
|---|---|
| • According to the correction scale<br>• At least half of the topics must be correct | • According to the correction scale<br>• At least 90% correct topics |

**Date of completion**
**11.09.2025**

**Discipline Coordinator,**
**Assoc.Prof. Gorecki Gabriel Petre**

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

**Course Coordinator,**
**Assoc.Prof. Gorecki Gabriel Petre**

**Laboratory Coordinator,**
**-**

**Department Approval Date**
**25.09.2025**

**TITU MAIORESCU UNIVERSITY OF BUCHAREST**
**FACULTY OF MEDICINE**
**MEDICINE IN ENGLISH PROGRAM**
**ACADEMIC YEAR: 2025-2026**

# DISCIPLINE FILE

| | |
|---|---|
| Faculty | **MEDICINE** |
| Department | **MEDICO-SURGICAL AND PROPHYLACTIC DISCIPINES** |
| 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** | Assoc. Prof. Olteanu Rodica | | | | | |
| Didactic position, name and surname for the **Course Coordinator** | Assoc. Prof. Olteanu Rodica | | | | | |
| Didactic position, name and surname for the **Coordinator** of the **Seminar / Laboratory / Clinical Traineeship** | - | | | | | |
| Discipline Code | **MLE.O.9** | Formative category of the discipline | | **CS** | | |
| Year of Study | **III** | Semester | **6** | Type of the final evaluation (**E, V**) | | **V6** |
| Discipline Regime (**M**-**m**andatory, **E**-**e**lective) | | | | **E** | No. of credits | **1** |

| | | | | | |
|---|---|---|---|---|---|
| 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 |
| 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 | 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** | EUROPEAN PROJECTS MANAGEMENT |
|---|---|
| **Specific professional competencies** | C4 – Application of project management principles in healthcare and research contexts. |
| **Transversal competencies** | C5 – Teamwork and communication in international projects; C6 – Professional responsibility and accountability. |
| **General objectives of the discipline** | To provide fundamental knowledge regarding the core scope of European projects management.<br>To develop understanding of clinical assessment and diagnostic reasoning relevant to European projects management.<br>To familiarize students with evidence-based principles, practical applications and patient-safety considerations in European projects management.<br>To establish a foundation for supervised clinical practice, academic reasoning and interdisciplinary collaboration in European projects management. |
| **Specific objectives of the discipline** | Identify common concepts, clinical presentations or practical situations addressed in European projects management.<br>Explain key mechanisms, diagnostic principles and professional standards relevant to European projects management.<br>Interpret essential clinical, laboratory, imaging, histopathological, epidemiological or technological data when applicable.<br>Apply discipline-specific reasoning to formulate appropriate diagnostic, therapeutic, preventive or procedural approaches under supervision.<br>Demonstrate responsible communication, documentation, teamwork and patient-safety awareness in academic and clinical contexts. |

| **Learning Outcomes** | |
|---|---|
| Knowledge | Describe the principles of project planning, implementation and evaluation in European health and research programs. |
| Skills | Develop project proposals, identify funding opportunities and apply management tools for planning and monitoring project activities. |
| Responsabilities/ Autonomy | Assume responsibility for planning and coordinating project activities while respecting ethical, financial and administrative regulations. |

| **Course Syllabus** | **Hours** |
|---|---|
| **Course #1 – The Project Concept**<br>Introduction to the definition, nature, and classification of projects. Analysis of project-specific | 1 |

| Course Syllabus | Hours |
|---|---|
| constraints (time, cost, scope) and their interdependence. Overview of the European context in project development and funding. | |
| **Course #2 – Historical and Strategic Evolution of Project Management**<br>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**<br>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**<br>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**<br>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 #6 – Time Management and Project Scheduling**<br>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**<br>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**<br>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**<br>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**<br>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**<br>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**<br>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**<br>Practical applications of key project tools: Work Breakdown Structure (WBS), Gantt charts, | 1 |

| Course Syllabus | Hours |
|---|---|
| PERT analysis, SMART objectives, SWOT analysis. Hands-on review of project planning software and budgeting templates. | |
| **Course #14 – Ethical Considerations and Final Integration Workshop**<br>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 |

**Minimum References:**


1. European Commission. *EU4Health Programme 2021–2027: A Vision for a Healthier European Union*. 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. *Organization and Financing of Public Health Services in Europe: Country Reports*. 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. *Health Policy*. 2012;105(1):1–9.
4. European Commission. *Better Health for All: EU Health Programme Projects 2003–2020*. Luxembourg: Publications Office of the European Union; 2020. Available from: https://op.europa.eu/en/publication-detail/-/publication/1e2a245f-97d2-11eb-b85c-01aa75ed71a1
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 | • Interactive learning based on logical and progressive presentation of content.<br>• Multimedia projection of lecture materials. |
| 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:** |
|---|
| - |

| **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:** |
|---|
| • 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 throught the semester | 15 % |
| - Projects / Translations / Posters / Essays, etc. | 15 % |
| - Other activities: | 0 % |

**Description of the actual methods of examination – E**

- Multiple choice examination

| **Minimal requirements for grade 5 (or how grade 5 is awarded)** | **Requirements for grade 10 (or how grade 10 is awarded)** |
|---|---|
| • According to the correction scale<br>• At least half of the topics must be correct | • According to the correction scale<br>• At least 90% correct topics |

**Date of completion**
**10.09.2025**

**Discipline Coordinator,**
**Assoc.Prof. Olteanu Rodica**

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

**Course Coordinator,**

**Laboratory Coordinator,**

**Assoc.Prof. Olteanu Rodica** -

**Department Approval Date**
**25.09.2025**

**TITU MAIORESCU UNIVERSITY OF BUCHAREST**
**FACULTY OF MEDICINE**
**MEDICINE IN ENGLISH PROGRAM**
**ACADEMIC YEAR: 2025-2026**

# DISCIPLINE FILE

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

| | | | | | | |
|---|---|---|---|---|---|---|
| Discipline`s Name | **LASER THERAPY** | | | | | |
| Didactic position, name and surname of the **Discipline Coordinator** | Lect. Sipoșean Georgel | | | | | |
| Didactic position, name and surname for the **Course Coordinator** | Lect. Sipoșean Georgel | | | | | |
| Didactic position, name and surname for the **Coordinator** of the **Seminar / Laboratory / Clinical Traineeship** | - | | | | | |
| Discipline Code | **MLE.O.10** | Formative category of the discipline | | **CS** | | |
| Year of Study | **III** | Semester | **6** | Type of the final evaluation (**E, V**) | | **V6** |
| Discipline Regime (**M**-**m**andatory, **E**-**e**lective) | | | | **E** | No. of credits | **1** |

| | | | | | |
|---|---|---|---|---|---|
| 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 |
| 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 | 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 | LASER THERAPY |
|---|---|
| **Specific professional competencies** | C2 – Application of medical technologies in therapy; C4 – Interpretation of technological procedures in medical practice. |
| **Transversal competencies** | C4 – Scientific reasoning; C6 – Responsibility regarding patient safety. |
| **General objectives of the discipline** | To provide fundamental knowledge regarding the core scope of Laser therapy.<br>To develop understanding of clinical assessment and diagnostic reasoning relevant to Laser therapy.<br>To familiarize students with evidence-based principles, practical applications and patient-safety considerations in Laser therapy.<br>To establish a foundation for supervised clinical practice, academic reasoning and interdisciplinary collaboration in Laser therapy. |
| **Specific objectives of the discipline** | Identify common concepts, clinical presentations or practical situations addressed in Laser therapy.<br>Explain key mechanisms, diagnostic principles and professional standards relevant to Laser therapy.<br>Interpret essential clinical, laboratory, imaging, histopathological, epidemiological or technological data when applicable.<br>Apply discipline-specific reasoning to formulate appropriate diagnostic, therapeutic, preventive or procedural approaches under supervision.<br>Demonstrate responsible communication, documentation, teamwork and patient-safety awareness in academic and clinical contexts. |

| Learning Outcomes | |
|---|---|
| Knowledge | Explain the physical principles of laser technology and its therapeutic applications in medicine. |
| Skills | Identify indications and safety protocols for laser-based treatments and interpret clinical outcomes of laser therapy. |
| Responsabilities/ Autonomy | Apply safety standards and ethical principles when evaluating laser therapy applications in clinical practice. |

| Course Syllabus | Hours |
|---|---|
| **Course #1. Fundamentals of Laser Physics and Medical Applications**<br>Introduction to laser physics: principles of light amplification, stimulated emission, wavelength, and coherence. Classification of medical lasers. Tissue-laser interactions: photothermal, photochemical, and photomechanical effects. Overview of therapeutic and surgical indications across medical disciplines. | 2 |

| Course Syllabus | Hours |
|---|---|
| **Course #2. Laser-Tissue Interaction and Dosimetry**<br>Mechanisms of energy absorption in biological tissues. Concepts of penetration depth, power density, and fluence. Parameters influencing tissue response: wavelength, pulse duration, mode of application. Principles of laser dosimetry and safety thresholds. | 2 |
| **Course #3. Low-Level Laser Therapy (LLLT)**<br>Definition and mechanism of action of LLLT. Biostimulation and photobiomodulation: effects on cellular metabolism, inflammation modulation, and tissue repair. Clinical indications in musculoskeletal, neurological, and dermatological disorders. Application techniques and protocols. | 2 |
| **Course #4. High-Intensity Laser Therapy (HILT)**<br>Thermal effects and clinical implications. Pain management and rehabilitation uses. Comparison with LLLT. Treatment protocols in sports injuries, degenerative diseases, and postoperative care. Case-based clinical discussion. | 2 |
| **Course #5. Laser Use in Dermatology and Wound Healing**<br>Laser treatment of vascular and pigmented lesions. Acne and scar treatment. Laser-assisted wound healing and chronic ulcer management. Practical aspects of selecting parameters for dermatologic conditions. Risk management and skin safety. | 2 |
| **Course #6. Laser Safety, Instrumentation, and Practical Considerations**<br>Medical laser equipment types and components. Eye and tissue safety considerations. Operational protocols and protective measures. National and international safety standards. Maintenance and calibration of laser devices in clinical settings. | 2 |
| **Course #7. Clinical Applications and Future Perspectives in Laser Therapy**<br>Overview of multi-specialty use: dentistry, ENT, ophthalmology, oncology. Integration of laser therapy into multimodal pain management. Emerging technologies: fractional lasers, photodynamic therapy, and robotic-assisted laser platforms. Ethical considerations and future directions in research. | 2 |

| Minimum References: |
|---|
| **1.** Hamblin MR, Huang YY, editors. **Photobiomodulation in the brain**. London: Academic Press; 2019. |
| **2.** Nouri K, editor. **Lasers in dermatology and medicine**. London: Springer; 2018. |
| **3.** Convissar RA. **Principles and practice of laser dentistry**. 2nd ed. St. Louis (MO): Elsevier; 2020. |
| **4.** Katzir A. **Lasers and optical fibers in medicine**. San Diego (CA): Academic Press; 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 |
|---|
| • |

| How the information is transmitted | |
|---|---|
| **Type of Activity** | **Teaching methods used** |
| Lecture | • Interactive learning based on logical and progressive presentation of content.<br>• Multimedia projection of lecture materials. |
| 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:** |
|---|
| - |

| **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:** |
|---|
| • 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 throught the semester | 15 % |
| - Projects / Translations / Posters / Essays, etc. | 15 % |
| - Other activities: | 0 % |

**Description of the actual methods of examination – E**

- Multiple choice examination

| **Minimal requirements for grade 5 (or how grade 5 is awarded)** | **Requirements for grade 10 (or how grade 10 is awarded)** |
|---|---|
| • According to the correction scale<br>• At least half of the topics must be correct | • According to the correction scale<br>• At least 90% correct topics |

**Date of completion**
**09.09.2025**

**Discipline Coordinator,**
**Lect. Sipoșean Georgel**

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

**Course Coordinator,**
**Lect. Sipoșean Georgel**

**Laboratory Coordinator,**
**-**

**Department Approval Date**
**25.09.2025**

**TITU MAIORESCU UNIVERSITY OF BUCHAREST**
**FACULTY OF MEDICINE**
**MEDICINE IN ENGLISH PROGRAM**
**ACADEMIC YEAR: 2025-2026**

# DISCIPLINE FILE

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

| | | | | | | |
|---|---|---|---|---|---|---|
| Discipline`s Name | **PHARMACOECONOMICS** | | | | | |
| Didactic position, name and surname of the **Discipline Coordinator** | Assoc. prof. Seiman Corina | | | | | |
| Didactic position, name and surname for the **Course Coordinator** | Assoc. prof. Seiman Corina | | | | | |
| Didactic position, name and surname for the **Coordinator** of the **Seminar / Laboratory / Clinical Traineeship** | - | | | | | |
| Discipline Code | **MLE.O.11** | Formative category of the discipline | | **DS** | | |
| Year of Study | **III** | Semester | **6** | Type of the final evaluation (**E, V**) | | **V6** |
| Discipline Regime (**M**-**m**andatory, **E**-**e**lective) | | | | **E** | No. of credits | **1** |

| | | | | | |
|---|---|---|---|---|---|
| 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 |
| 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 | 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 | PHARMACOECONOMICS |
|---|---|
| **Specific professional competencies** | C2 – Evaluation of therapeutic strategies; C4 – Interpretation of economic and clinical data. |
| **Transversal competencies** | C4 – Analytical decision-making; C6 – Ethical responsibility in healthcare management. |
| **General objectives of the discipline** | To provide fundamental knowledge regarding the core scope of Pharmacoeconomics.<br>To develop understanding of clinical assessment and diagnostic reasoning relevant to Pharmacoeconomics.<br>To familiarize students with evidence-based principles, practical applications and patient-safety considerations in Pharmacoeconomics.<br>To establish a foundation for supervised clinical practice, academic reasoning and interdisciplinary collaboration in Pharmacoeconomics. |
| **Specific objectives of the discipline** | Identify common concepts, clinical presentations or practical situations addressed in Pharmacoeconomics.<br>Explain key mechanisms, diagnostic principles and professional standards relevant to Pharmacoeconomics.<br>Interpret essential clinical, laboratory, imaging, histopathological, epidemiological or technological data when applicable.<br>Apply discipline-specific reasoning to formulate appropriate diagnostic, therapeutic, preventive or procedural approaches under supervision.<br>Demonstrate responsible communication, documentation, teamwork and patient-safety awareness in academic and clinical contexts. |

| Learning Outcomes | |
|---|---|
| Knowledge | Describe the economic principles of healthcare systems and methods used to evaluate the cost-effectiveness of medical treatments and pharmaceutical products. |
| Skills | Analyze pharmacoeconomic data and compare therapeutic strategies based on cost-effectiveness and healthcare outcomes. |
| Responsabilities/ Autonomy | Integrate economic evaluation into responsible decision-making regarding healthcare resource allocation. |

| Course Syllabus | Hours |
|---|---|
| **Course #1. The Role of Pharmacoeconomics in Health Systems**<br>Introduction to the role of pharmacoeconomics in evaluating healthcare systems. Historical development of the field and its core principles. Discussion on how pharmacoeconomics informs resource allocation and policy-making in modern healthcare. | 2 |

| Course Syllabus | Hours |
|---|---|
| **Course #2. Methodology and Health Cost Analysis**<br>Overview of key pharmacoeconomic methods. Classification of healthcare costs (direct, indirect, intangible). Introduction to basic biostatistics as applied in economic healthcare studies. | 2 |
| **Course #3. Outcomes, Utility, and Quality of Life Evaluation**<br>Exploration of outcome measurement in pharmacoeconomics. Concepts of utility, quality-adjusted life years (QALYs), and cost-utility analysis. Fundamentals of designing a pharmacoeconomic research project. | 2 |
| **Course #4. Databases, Modeling, and Reimbursement Applications**<br>Advantages and limitations of using clinical trial databases and real-world data in pharmacoeconomic studies. Introduction to reimbursement requests, modeling techniques, and critical appraisal of pharmacoeconomic literature. | 2 |
| **Course #5. Advanced Data Analysis in Pharmacoeconomics**<br>Presentation of advanced analytical methods used in pharmacoeconomic evaluations. Focus on sensitivity analysis, subgroup analysis, and interpretation of complex datasets in health economics. | 2 |
| **Course #6. Decision Analysis and Economic Modeling**<br>Introduction to decision trees, Markov models, and economic simulations. Application of decision analysis tools to guide therapeutic choices and health policy. | 2 |
| **Course #7. Applications in Health Insurance and Health System Management**<br>Real-world use of pharmacoeconomic evaluations in national insurance systems and healthcare management. Design and implementation of pharmacoeconomic studies with relevance to drug reimbursement and health service optimization. | 2 |

| **Minimum References:** |
|---|
| **1.** Drummond MF, Sculpher MJ, Claxton K, Stoddart GL, Torrance GW. **Methods for the economic evaluation of health care programmes**. 4th ed. Oxford: Oxford University Press; 2015. |
| **2.** Rascati KL. **Essentials of pharmacoeconomics**. 3rd ed. Philadelphia: Wolters Kluwer; 2020. |
| **3.** Neumann PJ, Sanders GD, Russell LB, Siegel JE, Ganiats TG, editors. **Cost-effectiveness in health and medicine**. 2nd ed. New York: Oxford University Press; 2017. |
| **4.** Towse A, Pritchard C, Devlin N, editors. **Cost-effectiveness thresholds: economic and ethical issues**. London: Office of Health Economics; 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** |
|---|
| • |

| **How the information is transmitted** | |
|---|---|
| **Type of Activity** | **Teaching methods used** |
| Lecture | • Interactive learning based on logical and progressive presentation of content.<br>• Multimedia projection of lecture materials. |
| 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:** |
|---|
| - |

| **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:** |
|---|
| • 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 throught the semester | 15 % |
| - Projects / Translations / Posters / Essays, etc. | 15 % |
| - Other activities: | 0 % |

**Description of the actual methods of examination – E**

- Multiple choice examination

| **Minimal requirements for grade 5 (or how grade 5 is awarded)** | **Requirements for grade 10 (or how grade 10 is awarded)** |
|---|---|
| • According to the correction scale<br>• At least half of the topics must be correct | • According to the correction scale<br>• At least 90% correct topics |

**Date of completion**
**10.09.2025**

**Discipline Coordinator,**
**Assoc.prof. Seiman Corina**

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

**Course Coordinator,**
**Assoc.prof. Seiman Corina**

**Laboratory Coordinator,**
**-**

**Department Approval Date**
**25.09.2025**