**ACADEMIC DISCIPLINE OVERVIEW**

1. **Program data**

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| 1.1. Higher education institution | Grigore T. Popa University of Medicine and Pharmacy Iasi |
| 1.2. Faculty | Medical Bioengineering |
| 1.3. Department | Biomedical Sciences |
| 1.4. Field of study | Health |
| 1.5. The cycle of studies | Bachelor |
| 1.6. Study program / qualification | Balneo-physiokinetotherapy and rehabilitation – english language / Physiokinetotherapist |

**2. Discipline data**

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| 2.1. Name of the discipline / Code | | | | **Histology. Pathological Anatomy** | | **RE1114** |
| 2.2. Teaching staff in charge with lectures | | | | **Lecturer Roxana Covali, MD, PhD**  **Lecturer Laura Adriana Rîșcanu, MD, PhD** | | |
| 2.3. Teaching staff in charge with practical activities | | | | **Lecturer Roxana Covali, MD, PhD**  **Lecturer Laura Adriana Rîșcanu, MD, PhD** | | |
| 2.4. Year of study | **I** | 2.5. Semester | **2** | 2.6. The type of assessment | **Exam, E2** | |
| 2.7. Discipline type | | **Mandatory** | | **Fundamental discipline** | | |

**3. Estimated total time (hours/semester of didactic activity)**

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| 3.1. Number of hours / week: | | 3.2. Courses number of hours / week | | 3.3. Seminars / practical classes  number of hours / week | | | |
| Semester 1 |  |  | |  | | | |
| Semester 2 | **2** | **1** | | **1** | | | |
| 3.4. Total number of learning hours: | **28** | 3.5. Of which: Courses | **14** | 3.6. Of which: Seminars / practical classes: | | | **14** |
| 3.7. Distribution of individual study time: | | | | | Hours sem. 1 | Hours sem. 2 | |
| Study time using course book materials, bibliography and hand notes | | | | |  | 10 | |
| Supplementary documentation in the library, using specialised platforms via internet and by field work | | | | |  | 5 | |
| Preparation time for seminars / practical classes, study themes, reviews, portfolio and essays | | | | |  | 7 | |
| Tutorship | | | | |  | 2 | |
| Examinations | | | | |  | 2 | |
| Other activities | | | | |  |  | |
| Total hours of individual study (*without examinations*) | | | | |  | **22** | |
| 3.8. Total hours per semester | | | | |  | **50** | |
| 3.9. Number of credits | | | | |  | **2** | |

**4. Preconditions (where applicable)**

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| 4.1. of curriculum | Anatomy |
| 4.2. of competences | Knowledge of the communication means between basic units of living matter and the extracellular environment, and of the physical phenomena at the basis of living world |

5. **Conditions (where applicable)**

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| 5.1. for lectures | Video projecting equipment |
| 5.2. for seminars / practical classes | Microscopes |

**6. Specific competences acquired**

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| **Professional competencies** | **C1.1** | Formulation of hypothesis and key concepts in order to explain normal structures |
| **C1.2** | Formulation of hypothesis and key concepts in order to explain syndromes /diseases |

7**.** **Objectives of the study discipline (according to the grid of specific competences acquired)**

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| 7.1. General objective | To make students accustomed to different body structures |
| 7.2. Specific objectives | To make students accustomed to tiny different structures of the human body  Knowledge of the macroscopic and microscopic structure of the body's organs and systems, in order to understand in other disciplines the functioning of these structures |

**8. Contents**

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| **8.1. Lectures** | | **Teaching methods** | **Observations** |
| 1 | Cell classification | Drawings. Interactive courses | 1 hour |
| 2 | Tissue classification | Drawings. Interactive courses | 1 hour |
| 3 | Histology of heart | Drawings. Interactive courses | 1 hour |
| 4 | Pathology of heart | Drawings. Interactive courses | 1 hour |
| 5 | Histology of skeletal muscles | Drawings. Interactive courses | 1 hour |
| 6 | Pathology of skeletal muscles | Drawings. Interactive courses | 1 hour |
| 7 | Histology of bones | Drawings. Interactive courses | 1 hour |
| 8 | Pathology of bones | Drawings. Interactive courses | 1 hour |
| 9 | Histology of peripheral nervous system | Drawings. Interactive courses | 1 hour |
| 10 | Pathology of peripheral nervous system | Drawings. Interactive courses | 1 hour |
| 11 | Histology of joints | Drawings. Interactive courses | 1 hour |
| 12 | Pathology of joints | Drawings. Interactive courses | 1 hour |
| 13 | Histology of central nervous system | Drawings. Interactive courses | 1 hour |
| 14 | Pathology of central nervous system | Drawings. Interactive courses | 1 hour |

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| **8.2. Practical activities - practical class** | | **Teaching methods** | **Observations** |
| 1 | Cell classification | Drawings. Interactive lessons. Microscopy. | 1 hour |
| 2 | Tissue classification | Drawings. Interactive lessons. Microscopy. | 1 hour |
| 3 | Histology of heart | Drawings. Interactive lessons. Microscopy. | 1 hour |
| 4 | Pathology of heart | Drawings. Interactive lessons. Microscopy. Macroscopy. | 1 hour |
| 5 | Histology of skeletal muscles | Drawings. Interactive lessons. Microscopy. | 1 hour |
| 6 | Pathology of skeletal muscles | Drawings. Interactive lessons. Microscopy. Macroscopy | 1 hour |
| 7 | Histology of bones | Drawings. Interactive lessons. Microscopy. | 1 hour |
| 8 | Pathology of bones | Drawings. Interactive lessons. Microscopy. Macroscopy | 1 hour |
| 9 | Histology of peripheral nervous system | Drawings. Interactive lessons. Microscopy. | 1 hour |
| 10 | Pathology of peripheral nervous system | Drawings. Interactive lessons. Microscopy. Macroscopy | 1 hour |
| 11 | Histology of joints | Drawings. Interactive lessons. Microscopy. | 1 hour |
| 12 | Pathology of joints | Drawings. Interactive lessons. Microscopy. Macroscopy | 1 hour |
| 13 | Histology of central nervous system | Drawings. Interactive lessons. Microscopy. | 1 hour |
| 14 | Pathology of central nervous system | Drawings. Interactive lessons. Microscopy. Macroscopy | 1 hour |

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| **8.3. Bibliography:** |
| ***Mandatory:*** |
| Course materials and practical works posted on the e-learning platform of UMF IasiOvalle, W., Nahirney, P. Netter’s essential histology with correlated histopathology. Elsevier, 2021 |
| 1. Gartner, L. Textbook of Histology. Elsevier, 2021. 2. Covali, R. Practical lessons of Histology, Stef Publishing House, Iași, 2017 3. Kumar, V., Abbas, A., Aster, J., Deyrup, A. Robbins & Kotran basic pathology. Elsevier, 2023. 4. Klatt, E., Kumar, V. Robbins & Kotran review of pathology. Elsevier, 2022 5. Nielsen, G.P., Rosenburg, A. Diagnostic pathology: bone. Elsevier, 2022 |

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| ***Elective:*** |
| 1. Covali, R. Challenging Histology Questions, Stef Publishing House, Iaşi, 2007  2. Dubowitz, V., Sewry, C., Oldfors , A. Muscle biopsy, a practical approach. Elsevier, 2021.  3. Goodman, C., Fuller, K. Goodman and Fuller’s Pathology, Implications for the Physical Therapist, Elsevier, 2021. |

**9. *Correlation of the discipline contents with the expectations of the epistemic community, professional associations, and representative employers from the afferent program field***

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| Knowledge and abilities are established as didactic objectives and specified as such in the analytic programs that are revised yearly. After their analysis by the study discipline staff, these are discussed and approved in the Curricular Committee, towards curricular harmonization among the various study disciplines. Along this entire process systematic evaluation is performed, directly if possible, regarding the correspondence of the contents to the expectations of the academic community and of the representatives of the social community, professional associations, and employers. |

**10. Evaluation**

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| Type of activity | Assessment criteria | Evaluation methods | Contribution to the final grade |
| Lectures | Acquiring theoretical notions and presented in the course | Written exam.  MCQ Examination | 80 % |
| Practical activities | Activities carried out in laboratory and conducted quality essays. | Colloquium practical activity | Admitted/ Rejected |
| Individual study | Preparation time for seminars / practical classes, study themes, reviews, portfolio and essays.  Individual study using coursebook materials, bibliography and hand notes, documentation in the library, using specialised platforms via internet and by field work. | Tests during the semester | 20 % |
| Minimal performance standard:   * Identification of the microscopic specimen: organ, tissue, cells * Identification of the disease of the organ, tissue, cells | | | |

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| Date | Holder of course / signature, | Holder of practical activities / signature, |
| 11.09.2024 | Lecturer Roxana Covali, MD, PhD  Lecturer Laura Adriana Rîșcanu, MD, PhD | Lecturer Roxana Covali, MD, PhD  Lecturer Laura Adriana Rîșcanu, MD, PhD |

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| Date of approval in the Department Council/Teaching Council, | | |
|  |  | Department director / signature, |
| 19.09.2024 |  | Associate Professor Daniela-Viorelia Matei, MD, PhD |