**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 | | | | **Orthopedics and Traumatology** | | **RE1215** |
| 2.2. Teaching staff in charge with lectures | | | | **Professor Paul Sîrbu, MD, PhD** | | |
| 2.3. Teaching staff in charge with practical activities | | | | **Assistant Professor Norin Forna, MD, PhD** | | |
| 2.4. Year of study | **II** | 2.5. Semester | **2** | 2.6. The type of assessment | **Exam, E2** | |
| 2.7. Discipline type | | **Mandatory** | | **Domain 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 | | | | |  | 6 | |
| Supplementary documentation in the library, using specialised platforms via internet and by field work | | | | |  | 6 | |
| Preparation time for seminars / practical classes, study themes, reviews, portfolio and essays | | | | |  | 5 | |
| Tutorship | | | | |  | 2 | |
| Examinations | | | | |  | 2 | |
| Other activities | | | | |  | 5 | |
| 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, physiology, physiopathology, radiology, orthosis techniques |
| 4.2. of competences | Knowledge of the macroscopic and microscopic structure of the body's organs and systems. Knowledge of the functioning of specific medical devices and devices, the structures and forms of the human locomotor system, the recognition of clinical symptoms and signs, the identification of physical therapy methods and techniques. Understanding the conditions and explaining the syndromes and/or diseases of the locomotor system through the knowledge of the anatomical structures involved. |

5. **Conditions (where applicable)**

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| 5.1. for lectures | Video logistics support |
| 5.2. for seminars / practical classes | Students will have appropriate equipment |

**6. Specific competences acquired**

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| **Professional competencies** | **C 2.2** | Basic knowledge for explaining and interpreting the opportunity of physical therapy programs adapted to the region treated and the type of pathology |
| **C 4.4** | The use of appropriate parameters in all forms of therapy, appreciating the analgesic, decontracting effects or the intensity of muscle contraction depending on the procedure applied |

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

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| 7.1. General objective | The accumulation of general and specialized knowledge and skills in the field of orthopedics and traumatology that allow understanding and familiarization with the professional activities carried out in the field. |
| 7.2. Specific objectives | Acquiring knowledge and skills to retrieve and interpret information from the orthopedic-traumatic field (clinical data, physiological parameters, pathological features, etc.)  The ability to synthesize some information from the orthopedic-traumatic field and from its collateral fields in order to establish various programs, procedures and recovery methods specific to each pathological situation;  Acquiring the necessary skills to work in a recovery service for patients with orthopedic-traumatic conditions. |

**8. Contents**

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| **8.1. Lectures** | | **Teaching methods** | **Observations** |
| 1 | Examination of the patient with orthopedic-traumatic diseases  Examination methods; Walking; Notions of physiotherapy. | Interactive lecture,  Discussions, Explanations | 2 hours |
| 2 | Traumatology of the upper limb: post-traumatic shoulder; posttraumatic elbow; posttraumatic hand; | 2 hours |
| 3 | Traumatology of the lower limb - Posttraumatic hip; posttraumatic knee, posttraumatic leg | 2 hours |
| 4 | Traumatology of the spine. | 2 hours |
| 5 | Musculoskeletal injuries. Muscle tear; Rupture of the Achilles tendon | 2 hours |
| 6 | Traumatic meniscal injuries - Pathological anatomy; Production mechanism; Symptoms and diagnosis; Imaging; Treatment | 2 hours |
| 7 | Algoneurodystrophy – Symptomatology; Treatment; | 2 hours |

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| **8.2. Practical activities - practical class** | | **Teaching methods** | **Observations** |
| 1 | Presentation of the orthopedics-traumatology service, distribution of beds; Anamnesis and clinical examination at the bedside, paraclinical examinations; | Interactive lecture,  Discussions, Explanations | 2 hours |
| 2 | Clinical and paraclinical examination of the posttraumatic shoulder and elbow; | Interactive lecture,  Discussions, Explanations | 2 hours |
| 3 | Clinical and paraclinical examination of the posttraumatic hand | Interactive lecture,  Discussions, Explanations | 2 hours |
| 4 | Clinical and paraclinical examination of the posttraumatic balance | Interactive lecture,  Discussions, Explanations | 2 hours |
| 5 | Clinical and paraclinical examination of the posttraumatic knee | Interactive lecture,  Discussions, Explanations | 2 hours |
| 6 | Clinical and paraclinical examination of the posttraumatic foot | Interactive lecture,  Discussions, Explanations | 2 hours |
| 7 | Clinical and paraclinical examination in spine traumatology | Interactive lecture,  Discussions, Explanations | 2 hours |

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| **8.3. Bibliography:** |
| ***Mandatory:*** |
| 1. The course and practical works on the E-learning platform 2. Sîrbu PD,W.D. Belangero, W. Friedl,N. Schwarz,M. List, Osteosinteza biologica cu placi, Editura “Gr.T.Popa”, Iasi Romania-2017 3. Clinical Orthopaedic Rehabilitation A Team Approach, 4e by Charles E Giangarra MD, Robert C. Manske PT DPT SCS MEd ATC CSCS (z-lib.org), Elsevier Publishing House, Philadelphia 2018 4. Peter V. Giannoudis, Practical Procedures in Elective Orthopedic Surgery, Springer, 2012 |
| ***Elective:*** |
| 1. Ghid de medicina fizică și recuperare medicală. Autori: Mircea Beuran, Georgiana-Ozana Tache Editura Scripta, Bucuresti, 2017  2. Paul-Dan Sirbu, Wilhelm Friedl, Dan Mihailescu, Liliana Savin, Andrei Scripcaru, Norin Forna, Mihnea Theodor Sirbu, Mihaela Pertea, Razvan Cosmin Tudor; Clinical and Experimental Biomechanical Studies Regarding Innovative Implants in Traumatology, IntechOpen Limited, 2020, March 17th; DOI: 10.5772/intechopen.91728  3. Badulescu OV, Bojan IB, Vladeanu M,Badescu C, Bojan A, Sirbu PD, Ciocoiu M.(2019); Chapter : Optimal management of elective joint replacement surgery in patients with hemophilia (Published online first), Biosurgicals – The Next Frontier of Elective Joint Approaches, Michael S. Firstenberg (Ed), IntechOpen, DOI: 10.5772/intechopen.90016 |

**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.  Study time 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:   * Post-traumatic clinical examination of the upper and lower limb | | | |

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| Date | Holder of course / signature, | Holder of practical activities / signature, |
| 14.09.2024 | Professor Paul Sîrbu, MD, PhD | Assistant Professor Norin Forna, MD, PhD |

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