**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 | **b. Manual Therapy** | **RE1225** |
| 2.2. Teaching staff in charge with lectures | **-** |
| 2.3. Teaching staff in charge with practical activities |  **Lecturer Dragoș Sardaru, PhD** |
| 2.4. Year of study | **II** | 2.5. Semester | **2** | 2.6. The type of assessment | **Colloquium, C2** |
| 2.7. Discipline type | **Elective** | **Specialty 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 | **1** |  | **1** |
| 3.4. Total number of learning hours: | **14** | 3.5. Of which: Courses |  | 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 |  | 12 |
| Supplementary documentation in the library, using specialised platforms via internet and by field work |  | 12 |
| Preparation time for seminars / practical classes, study themes, reviews, portfolio and essays |  | 12 |
| Tutorship |  | 4 |
| Examinations |  | 4 |
| Other activities |  |  |
| Total hours of individual study (*without examinations*) |  | **36** |
| 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, Biomechanics, Pathophysiology and Kinesiology basic notions. |
| 4.2. of competences | Basic skills of techniques of joint and soft tissue mobilization and techniques of massage therapy. |

5. **Conditions (where applicable)**

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| 5.1. for lectures | Video, white board |
| 5.2. for seminars / practical classes | Functional anatomy model for different joints. Biomechanics and physiological charts for muscle and joint action. |

**6. Specific competences acquired**

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| **Professional competencies** | **C5.4** | Physiotherapeutic functional evaluation of musculoskeletal apparatus tests. Development of the sensitivity of the touch needed for soft tissue and joint mobilization.Principles of mobilization/manipulation of the soft tissue and joint complex based on functional anatomy and kinesiology. |
| **C6.4** | Utilization of appropriate manual techniques to diminish muscle spasm and inflammation; to increase muscle strength, range of motion, endurance and functional and physical work capacity and to provide treatment adapted to the functional aspects of the illness. |

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

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| 7.1. General objective | To understand and know the functional anatomy, clinical biomechanics and kinesiology bases for soft tissue and joint specific mobilization. To be able to integrate manual therapy notions in general physiotherapy rehabilitation sessions. |
| 7.2. Specific objectives | To evaluate the functionality of the joints and soft tissue in order to exclude contraindications for specific manual therapy mobilization/manipulation. To be able to safely apply manual therapy techniques in concordance with the impairments of the musculoskeletal system and general medical recommendations.  |

**8. Contents**

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| **8.2. Practical activities - practical class**  | **Teaching methods** | **Observations** |
| 1 | Introduction in practice of the Manual therapy. Practical application of concavity-convexity low of articular mobilization/manipulation. | Practical demonstrations and applications | 2h |
| 2 | The principles of applying orthopedic manual physiotherapy. Algorithms in the application of degrees of joint mobilization. Models of hypomobility. Examination and evaluation. The red flags | Practical demonstrations and applications | 2h |
| 3 | The effects of mobilization techniques. Indications and contraindications. | Practical demonstrations and applications | 2h |
| 4 | Soft tissue mobilization and joint specific manipulation for shoulder and shoulder girdle region. | Practical demonstrations and applications | 2h |
| 5 | Soft tissue mobilization and joint specific manipulation for hip region. | Practical demonstrations and applications | 2h |
| 6 | Soft tissue mobilization and joint specific manipulation for knee region. | Practical demonstrations and applications | 2h |
| 7 | Soft tissue mobilization and joint specific manipulation for cervical spine region. | Practical demonstrations and applications | 2h |

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| **8.3. Bibliography:** |
| ***Mandatory:*** |
| 1. Sardaru D. - Materials posted on the UMF Iasi e-learning platform.
2. Shamus E, van Dujin A. **Manual Therapy Of The Extremities. Jones and Barlet Learning**, Burlington, SUA, 2016.
3. Kaltenborn FM, van Dujin AJ. **Manual Mobilization of the Joints, Vol 1: Extremities**, 6th ed., 2002.
4. Olson AO. **Manual Physical Therapy of the Spine,** 2nd ed. St. Louis Missour, Elsevier, 2009.s
5. Luchau T, Myers W. **Advanced Myofascial Techniques: Neck, Head, Spine and Ribs**, Scotland, Handspring Publishing Limited, 2015
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| ***Elective:*** |
| 1. Muscolino Joseph E, **Kinesiology. The skeletal system and muscle function.** 2nd ed. Missouri, Elsevier, 2011.
2. Norkin C Cynthia. **Measurement of joint motion. A guide to goniometry**. 4th ed. Philadelphia, Devis Company, 2009.
3. Buckup F. **Clinical tests for the musculoskeletal system**. 2nd ed. Stuttgart. New York. Thieme. 2008.
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**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 |  |
| Practical activities | Activities carried out in laboratory and conducted quality essays. | Colloquium practical activity | 80% |
| 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:* Knowing the theoretical bases and delivering correctly a minimum of 2 manual therapy techniques.
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| Date | Holder of course / signature, | Holder of practical activities / signature, |
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5.09.2024 Lecturer Sardaru Dragos PhD

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

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