**ACADEMIC DISCIPLINE OVERVIEW**

1. **Program data**

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| **1.1.** | **GRIGORE T. POPA UNIVERSITY OF MEDICINE AND PHARMACY IASI** |
| **1.2.**  | **FACULTY OF MEDICAL BIOENGINEERING**  |
| **1.3.** | **PROGRAMME:** Physio-kinetotherapy and rehabilitation |
| **1.4.**  | **STUDY FIELD:** Health |
| **1.5.** | **STUDY CYCLE**: UNDERGRADUATE |
| **1.6.** | **STUDY PROGRAMME:** INENGLISH |
| 1. **Subject data**
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| **2.1.** | **Subject:** Manual therapy  |
| **m** | **Module leader:**  |
| **2.3.** | **Seminar leader: Assistant Sardaru Dragos** |
| **2.4. Year of study** | **2** | **2.5. Semester in which is taught** | **1** | **2.6. Evaluation type** | C | **2.7. Subject status** |  MandatoryDS |

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

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| **3.1.Number of hours / week** | 3 | **3.2. Courses number of hours / week** | 2 | **3.3.practical classes/ clinical training** | 1 |
| **3.4. Total number of learning hours** | 42 | **3.5. Courses** | 28 | **3.6. practical classes/ clinical training** | 14 |
| **3.7. Distribution of the available time** | Hours |
| **Study based on the manual, lecture support, bibliography and hand notes** | 4 |  |
| **Supplementary documentation in the library, using specialised platforms via internet and by field work** | 2 |  |
| **Preparation for seminars / practical classes, study themes, reviews, portofolio, and essays** | 2 |  |
| **Tutorship** | 2 |  |
| **Examinations** | 2 |  |
| **Other activities (clinical training)** |  |  |
| **3.8. Total hours of individual study** | 8 |  |
| **3.9. Total hours pes semester** | 50 |  |
| **3.10. Number of credits** | 2 |  |

1. **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. |

1. **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. |

1. **Specific competences acquired**

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| Professional competences (expressed as knowledge and abilities) | 1. Physiotherapeutic functional evaluation of musculoskeletal apparatus tests. Development of the sensitivity of the touch needed for soft tissue and joint mobilization.2. Principles of mobilization/manipulation of the soft tissue and joint complex based on functional anatomy and kinesiology.3. 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. |
| Transverse competences (of role, of professional development, personal) | Capability of integrating manual therapy techniques in physiotherapy sessions according with the overall clinical medical evaluation and recommendations.  |

1. **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.  |

1. **Contents**

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| **Semester I** |  | **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 | 4h |
| 2 | Soft tissue mobilization (PNF stretching/miotensive/MET, mobilization with movement, miofascial techniques) and joint specific manipulation for shoulder and shoulder girdle region. | 4h |
| 3 | Soft tissue mobilization (PNF stretching/miotensive/MET, mobilization with movement, miofascial techniques) and joint specific manipulation for elbow and hand region. | 4h |
| 4 | Soft tissue mobilization (PNF stretching/miotensive/MET, mobilization with movement, miofascial techniques) and joint specific manipulation for hip region. | 4h |
| 5 | Soft tissue mobilization (PNF stretching/miotensive/MET, mobilization with movement, miofascial techniques) and joint specific manipulation for knee region. | 4h |
| 6 | Soft tissue mobilization (PNF stretching/miotensive/MET, mobilization with movement, miofascial techniques) and joint specific manipulation for foot region. | 4h |
| 7 | Integrated manual therapy techniques for upper and lower limb dysfunctions | 4h |
|  | **Clinical training** |  |  |
|  | Manual therapy techniques for upper limb dysfunctions | Case study | 4h |
|  | Manual therapy techniques for lower limb dysfunctions | Case study | 4h |
|  | Manual therapy for cervical dysfunctions | Case study | 2 h |
|  | Manual therapy for sacral and lumbar region dysfunctions | Case study | 4h |
| **Bibliography****mandatory**1. Notes from lectures and practical classes.
2. Muscolino Joseph E, **Kinesiology. The skeletal system and muscle function.** 2nd ed. Missouri, Elsevier, 2011.
3. Norkin C Cynthia. **Measurement of joint motion. A guide to goniometry**. 4th ed. Philadelphia, Devis Company, 2009.
4. Buckup F. **Clinical tests for the musculoskeletal system**. 2nd ed. Stuttgart.New York. Thieme. 2008.
5. Shamus E, van Dujin A. **Manual Therapy Of The Extremities**.Jones and Barlet Learning, Burlington, SUA, 2016.
6. Kaltenborn FM, van Dujin AJ. **Manual Mobilization of the Joints, Vol 1: Extremities**, 6th ed., 2002.
7. Olson AO. **Manual Physical Therapy of the Spine**, 2nd ed. St. Louis Missour, Elsevier, 2009.s
8. Luchau T, Myers W. **Advanced Myofascial Techniques: Neck, Head, Spine and Ribs**, Scotland, Handspring Publishing Limited, 2015.
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1. **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. |

1. **Evaluation**

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| **Type of activity** | **Type of activity** | **Evaluation methods** | **Contribution to the final grade** |
| **Lecture** | Assimilation of the theoretical notions and aspects presented for manual therapy. | Written exam | 40% |
| **Seminar/practical classes** | To demonstrate the he can reproduce actively and knowingly the practical techniques presented in practical classes | Practical Exam | 50% |
| Activity during semester |  | 10% |
| **Minimal performance standard: Knowing the theoretical bases and delivering correctly a minimum of 2 manual therapy techniques.** |

**Date of completion: Signature of head of discipline**

Assistant Sardaru Dragos, Ph-D

20.09.2019

**Department approval date**

30.00.2019

 **Signature of department director**

Lecturer Daniela-Viorelia Matei, Ph-D