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: RE\_1209\_Kinetoprophilaxy.Kinetotherapy** |
| **2.2.** | **Module leader:** Associate professor Mariana Rotariu, Ph-D |
| **2.3.** | **Seminar leader: Assist.phd Sardaru Dragos**  |
| **2.4. Year of study** | **2** | **2.5. Semester in which is taught** | **1,2** | **2.6. Evaluation type** | Written exam | **2.7. Subject status** | Mandatory/D.S.  |

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

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| **3.1.Number of hours / week** | 44 | **3.2. Courses number of hours / week** | 22 | **3.3. practical classes/ clinical training** | 22 |
| **3.4. Total number of learning hours** | 5656 | **3.5. Courses** | 2828 | **3.6. practical classes/ clinical training** | 2828 |
| **3.7. Distribution of the available time** | Hours |
| **Study based on the manual, lecture support, bibliography and hand notes** | 14 |
| **Supplementary documentation in the library, using specialised platforms via internet and by field work** | 14 |
| **Preparation for seminars / practical classes, study themes, reviews, portofolio, and essays** | 10 |
| **Tutorship** | 2 |
| **Examinations** | 4 |
| **Other activities** | - |
| **3.8. Total hours of individual study** | 38 |
| **3.9. Total hours pes semester** | 150 |
| **3.10. Number of credits** | 6 |

1. **Preconditions (where applicable)**

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| **4.1.** of curriculum | Theoretical and methodical basis of kinesiology |
| **4.2.** of competences | Informations about the locomotion mechanics, posture, types of movement |

1. **Conditions (where applicable)**

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| **5.1.** for lectures | Video logistic support |
| **5.2.** for seminars / practical classes | Casual clothing |

1. **Specific competences acquired**

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| Professional competences (expressed as knowledge and abilities)  | C1.3 Application of kinesiology program in correlation with functional diagnosis, doctor’s indication, secondary prophylaxis. C1.5 Development and implementation of new protocols of Kinesiology.C1.4 Utilization of adequate parameters in augmenting articular mobility, muscle force, coordination, equilibrium, and amelioration of modified physiological parameters: cardiovascular.C1.5 Development and implementation of new kinesiology protocols. |
| Transverse competences (of role, of professional development, personal) | The identification of the roles and responsibilities when working in a multidisciplinary team. |

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

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| **7.1.** General objective | To know the methodical bases of the kinesiology in order to be able to reestablish reduced functions and regaining the functional level in diverse disabilities through the reintegration of the therapeutic physical exercise in the life of the patient.To prepare for the promotion of the health condition and rehabilitation of persons with different conditions, based upon a good science based knowledge of the human body, of the physiological functions and the relation existing between the health status and the physical and social environment.  |
| **7.2.** Specific objectives | To know the implication of the kinesiology in the process of health regaining. To know the immediate and tardive adaptation of the somatic and vegetative function during the physical exercise. To accumulate the techniques, exercises and kinetic methods.a. For prophylaxis through kinetic means:- prevention of the illness- prevention of the aggravation or appearance of the complication on the pathological, morphological and functional level of an chronic illness.b. For the rehabilitation kinesiology:- rehabilitation of the functional deficit in the chronic diseases.  |
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1. **Contents**

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| **First Semester** | **8.1. Lecture** | **Teaching methods** | **Observations** |
| **1** | Generalities. Definition. Terminology. The history and importance of the discipline. General principles. General Objectives  | PPT presentation  | 4h |
| **2** | Methodical requirement for medical kinesiology. Repose regimen. The methodical forms of application of the kinesiology. Organizational framework.  | PPT presentation  | 4h |
| **3** | Kinesiology – its place and importance in medical rehabilitation. Physical bases for kinesiology - force and movement, gravity, equilibrium. | PPT presentation  | 4h |
| **4** | Anatomical bases for kinesiology – the joint, muscle and the nerve. Physiological and pathophysiological bases in kinesiology - the joint, the muscle, the nerve – muscle complex, the nerve.  | PPT presentation  | 4h |
| **5** | Technical means for kinesiology. Classification: techniques, exercises, procedures, methods and methodologies.Techniques – akinetic techniques: immobilization and postures. | PPT presentation  | 4h |
| **6** | Passive dynamic kinetic techniques. Effects of the passive mobilization. Principles and conditions of application. | PPT presentation  | 4h |
| **7** |  Active dynamic kinetic techniques. Effects. Principles and condition of application. Static kinetic techniques. Effects. Principles and conditions of application. | PPT presentation  | 4h |
| **second Semester** | **8.2. Lecture** | **Teaching methods** | **Observations** |
| **1** | Static kinetic techniques. Types of muscular contraction | PPT presentation  | 4h |
| **2** | Therapeutic physical exercise. Definition. Content. Form. Classification. Specific aspects for the utilization of the physical exercise as the base for kinesiology. Procedural bases for the therapeutic physical exercise: position and movement, muscular contraction, facilitation techniques. | PPT presentation  | 4h |
| **3** |  Proprioceptive neuromuscular facilitation techniques. | PPT presentation  | 4h |
| **4** | Method utilized in kinesiology. Definition, Classification. Kabat therapeutical concept. Bobath therapeutical concept. | PPT presentation  | 4h |
| **5** | Mechanotherapy, occupational therapy, vertebral tractions, manipulations. | PPT presentation  | 4h |
| **6** | Hydrokinetotherapy, Therapeutic sport | PPT presentation  | 4h |
| **7** | Basic objectives in kinetotherapy | PPT presentation  | 4h |
| **Bibliography**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. Thompson C John. **Netter’s concise orthopaedic anatomy**. 2nd ed. Saunders Elsevier.
5. Buckup F. **Clinical tests for the musculoskeletal system**. 2nd ed. Stuttgart.New York. Thieme. 2008.
6. Plowmand Sharon A., Smith Denise L. **Exercise Physiology. For health, fitness and performance.** 4th ed. Baltimore-Philadelphia, Lippincott Williams, 2014
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| **First semester** | **8.2. Seminar / practical classes** | **Teaching methods** | **Observations** |
| **1** | Kinesiology – definition, terminology, history. | PPT and video presentation, practical demonstrations and aplications | 4h |
| **2** | Human locomotion – evolution, biped position, movement classification. | PPT and video presentation, practical demonstrations and aplications | 4h |
| **3** | Physical bases of kinesiology – the force and movement, gravitation, equilibrium. | 4h |
| **4** | Mechanotherapy – pulley therapy, levers and inclined plane. | 4h |
| **5** | Practical- Technical means for kinesiology. Classification: techniques, exercises, procedures, methods and methodologies.Techniques – akinetic techniques: immobilization and postures. | PPT and video presentation, practical demonstrations and aplications | 4h |
| **6** | Practical- Passive dynamic kinetic techniques. Effects of the passive mobilization. Principles and conditions of application. | PPT and video presentation, practical demonstrations and aplications | 4h |
| **7** | Practical - Active dynamic kinetic techniques. Effects. Principles and condition of application. Static kinetic techniques. Effects. Principles and conditions of application. | PPT and video presentation, practical demonstrations and aplications | 4h |
| **Second semester** | **8.2. Seminar / practical classes** | **Teaching methods** | **Observations** |
| 1 | Practical- Static kinetic techniques. Types of muscular contraction | PPT and video presentation, practical demonstrations and aplications | 4h |
| 2 | Practical- Therapeutic physical exercise | PPT and video presentation, practical demonstrations and aplications | 4h |
| 3 | Practical-Proprioceptive facilitating techniques | PPT and video presentation, practical demonstrations and aplications | 4h |
| 4 | Practical- Method utilized in kinesiology, Kabat therapeutical concept. Bobath therapeutical concept. | PPT and video presentation, practical demonstrations and aplications | 4h |
| 5 | Practical-Mechanotherapy, occupational therapy, vertebral tractions, manipulations. | PPT and video presentation, practical demonstrations and aplications | 4h |
| 6 | Static kinetic techniques – isometric muscular contraction, muscular relaxation. | PPT and video presentation, practical demonstrations and aplications | 4h |
| 7 | Therapeutic physical exercises – structure, examples, principles of action, preferential positions for start and movement activation. | PPT and video presentation, practical demonstrations and aplications | 4h |
| **Bibliography**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. Thompson C John. **Netter’s concise orthopaedic anatomy**. 2nd ed. Saunders Elsevier.
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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** | **Evaluation criteria** | **Evaluation methods** | **Contribution to the final grade** |
| **Lecture** | Acquirement of the notions and theoretical aspects presented during the lectures  | Written exam | 50% |
| **Seminar/practical classes** | Activity during the practical classes | Practical exam | 40% |
| Activity during the semester |  | **10%** |
| **Minimal standard for promovation:****To be capable of presenting and applying kinesiology methods and techniques.** |

**Date: Signature of head of discipline**

23.09.2019 Associate professor Mariana Rotariu, Ph-D

 Assist. Sardaru Dragos Ph-D

**Department approval date**

30.09.2019 **Signature of department director**

Lecturer Daniela-Viorelia Matei, Ph-D