**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: IN ENGLISH | | | | | | | |
| 1. **Subject data** | | | | | | | | |
| 2.1. | Subject: Kinethology **RE 1115** | | | | | | | |
| 2.2. | Module leader: Associate professor phd Mariana Rotariu | | | | | | | |
| 2.3. | Seminar leader: Asist.phd. Ionite catalin | | | | | | | |
| 2.4. Year of study | | 1 | 2.5. Semester in which is taught | 2 | 2.6. Evaluation type | E1 | 2.7. Subject status | Mandatory  DS |

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.Seminar / l practical classes | 1 |
| 3.4. Total number of learning hours | 42 | 3.5. Courses | 28 | 3.6. Seminar / practical classes | 14 |
| 3.7. Distribution of the available time | | | | | Hours |
| Study based on the manual, lecture support, bibliography and hand notes | | | | | 23 |
| Supplementary documentation in the library, using specialised platforms via internet and by field work | | | | | 10 |
| Preparation for seminars / practical classes, study themes, reviews, portofolio, and essays | | | | |  |
| Tutorship | | | | | 3 |
| Examinations | | | | | 2 |
| Other activities | | | | | - |
| 3.8. Total hours of individual study | | | | | 33 |
| 3.9. Total hours pes semester | | | | | 75 |
| 3.10. Number of credits | | | | | 3 |

1. Preconditions (where applicable)

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| 4.1. of curriculum |  |
| 4.2. of competences |  |

1. Conditions (where applicable)

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| 5.1. for lectures | Logistic video support |
| 5.2. for seminars / practical classes |  |

1. Specific competences acquired

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| Professional competences (expressed as knowledge and abilities) | C1.3 construction and application of kinetotherapy, programs related to the functional diagnosis and according to the physician's indications, also performing .  C1.4 Use of adequate exercises , parameters in the techniques to increase articular mobility, muscle force, coordination, balance, to improve certain altered parameters: cardiovascular, respiratory... |
| Transverse competences (of role, of professional development, personal) | Knowledge, understanding concepts, theories and basic methods of the scope and area of specialization; use appropriate communication professional  Using the knowledge base for explaining and interpreting  various types of concepts, situations, processes, projects, etc. associated domain |

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

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| 7.1. General objective | Accumulation of knowledge related to the theoretical and methodical bases of kinetotherapy. |
| 7.2. Specific objectives | Familiarization with illnesses and health recovery prophylaxis techniques.  Development of certain field specific programs and correlations with the results from related fields. |

1. Contents

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| 8.1. Lecture | Teaching methods | Observations |
| Subject importance. History. Terminology. Definition, Kinetotherapy, Kinetoprophylaxy as science. Interrelation with other disciplines. | Verbal methods: explanation  Intuitive methods: PowerPoint, video, observation. | 4 hrs |
| Kinetoprophylaxy of static and dynamic disorders. | Verbal methods: explanation  Intuitive methods: PowerPoint, video, observation. | 4 hrs |
| Their importance in kinetoterapy and Kinetoprophylaxy. Types of muscular contractions: static (isometric) and dynamic (isotonic). Physiological effects. Applicability. Their importance in kinetoterapy and Kinetoprophylaxy. | Verbal methods: explanation  Intuitive methods: PowerPoint, video, observation. | 4 hrs |
| Bone adaptive modifications. Morphofunctional characteristics of the “organ” bone. Evolution of bone mass with age. Bone remodeling. Stress/strain relationship. The effects of mechanical forces on the bone. Form-function relationship. Bone repair (stages). The relation of bone pathology / kinetotherapy and kinetoprophylaxy . | Verbal methods: explanation  Intuitive methods: PowerPoint, video, observation. | 4 hrs |
| Articular adaptive modifications. Morphofunctional characteristics. Notions of hydrodynamics and articular tribology. Their importance in prophylactic and therapeutic medical kinesiology. | Verbal methods: explanation  Intuitive methods: PowerPoint, video, observation. | 4 hrs |
| The relationships between: the pathology of cartilage – kinetotherapy; articular pathology – kinetotherapy; tendo-ligamentous pathology; kinetotherapy; neuro-muscular pathology – kinetotherapy. | Verbal methods: explanation  Intuitive methods: PowerPoint, video, observation. | 4 hrs |
| Thermoregulation in physical activity. The role of warming up in physical activity. Hydroelectrolytic and excretory modifications. Their importance in medical gymnastics. | Verbal methods: explanation  Intuitive methods: PowerPoint, video, observation. | 4 hrs |
| Bibliography  1. Apostol, I., Ergofiziologie - Course. Ed. Univ. „Al. I.Cuza”, Iaşi, 1998.  2. Baciu, Cl., Aparatul locomotor. Ed. Medicală, Bucharest, 1981.  3. Hăulică, I., Fiziologie umană, 3rd Edition, Ed. Medicală, Bucharest, 2007.  4. Sbenghe, T., Bazele teoretice şi practice ale kinetoterapiei, Ed. Medicală, Bucharest, 1999.  5. Sbenghe, T., Kinetologie profilactică, terapeutică şi de recuperare, Ed. Medicală, Bucharest, 1987  6. Sbenghe, T., Kinesiologie, ştiinţa mişcării, Ed. Medicală, Bucharest, 2008.  7. Ionescu A.N. Gimnastica medicala, Ed. All Bucuresti 1994  8. Balint Nela Tatiana Kinetoprofilaxie, Editura Alma Mater Bacău – 2010  9. Plas F., Hagron E. Kinetoterapia active, Ed Polirom, Iasi, 2001  10.Albu C. Vlad T. Albu A., kinetoterapia active, Ed Polirom, Iasi, 2001  11. Dumitru D. , Reeducarea functionala in afectiunile coloanei vertebrale, Ed Sport-Turism, Bucuresti, 1984 | | |
| 8.2. Seminar / practical classes | Teaching methods |  |
| Physiological and anatomical bases of kinesiology: the bone, cartilage, articulation, articular, synovial capsule, synovial liquid. | Verbal methods: explanation  Intuitive methods: PowerPoint, video, observation. | 2 hrs |
| Physiological and anatomical bases of kinesiology/ gymnastics: the muscle, nerve. | Verbal methods: explanation  Intuitive methods: PowerPoint, video, observation. | 2 hrs |
| Motor control. The nerve – muscle complex. | Verbal methods: explanation  Intuitive methods: PowerPoint, video, observation. | 2 hrs |
| Primary and secondary Kinetoprophylaxis of the body deficiencies | Verbal methods: explanation  Intuitive methods: PowerPoint, video, observation. | 2 hrs |
| Primary and secondary Kinetoprophylaxis by age group | Verbal methods: explanation  Intuitive methods: PowerPoint, video, observation. | 2 hrs |
| Primary and secondary Kinetoprophylaxis in metabolic disorders | Verbal methods: explanation  Intuitive methods: PowerPoint, video, observation. | 2 hrs |
| Fitness base component in Kinetoprophylaxis | Verbal methods: explanation  Intuitive methods: PowerPoint, video, observation. | 2 hrs |
| Bibliography  1. Apostol, I., Ergofiziologie - Course. Ed. Univ. „Al. I.Cuza”, Iaşi, 1998.  2. Baciu, Cl., Aparatul locomotor. Ed. Medicală, Bucharest, 1981.  3. Hăulică, I., Fiziologie umană, 3rd Edition, Ed. Medicală, Bucharest, 2007.  4. Sbenghe, T., Bazele teoretice şi practice ale kinetoterapiei, Ed. Medicală, Bucharest, 1999.  5. Sbenghe, T., Kinetologie profilactică, terapeutică şi de recuperare, Ed. Medicală, Bucharest, 1987  6. Sbenghe, T., Kinesiologie, ştiinţa mişcării, Ed. Medicală, Bucharest, 2008.  7. Ionescu A.N. Gimnastica medicala, Ed. All Bucuresti 1994  8. Balint Nela Tatiana Kinetoprofilaxie, Editura Alma Mater Bacău – 2010  9. Plas F., Hagron E. Kinetoterapia active, Ed Polirom, Iasi, 2001  10.Albu C. Vlad T. Albu A., kinetoterapia active, Ed Polirom, Iasi, 2001  11. Dumitru D. , Reeducarea functionala in afectiunile coloanei vertebrale, Ed Sport-Turism, Bucuresti, 1984 | | |

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 | Familiarization with theoretical notions and aspects introduces during the course. | Written exam | 50% |
| Seminar/practical classes | Themes of practical works | Written exam and Practical activity oral exam | 40% |
| Activity during semester |  | 10% |
| Minimal performance standard: Promotion with a grade of minimum 5   * knowledge of the general mechanism of locomotion * knowledge of the role of physical effort in adaptation * knowledge of movement amplitude assessment and of the practical bases of recovery. | | | |

Date Signature of head of discipline

23.09.2019 Associate professor phd Rotariu Mariana

Asist.phd. Ionite catalin

Department approval date

30.09.2019 Signature of department director

Lecturer Daniela-Viorelia Matei, Ph-D