**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 | **Medical Gymnastics Elements** | **RE1105** |
| 2.2. Teaching staff in charge with lectures | **-** |
| 2.3. Teaching staff in charge with practical activities | **Lecturer Cătălin Ionițe, PhD** |
| 2.4. Year of study | **I** | 2.5. Semester | **1** | 2.6. The type of assessment | **Colloquium, C1** |
| 2.7. Discipline type | **Mandatory** | **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 | **2** |  | **2** |
| Semester 2 |  |  |  |
| 3.4. Total number of learning hours: | **28** | 3.5. Of which: Courses |  | 3.6. Of which: Seminars / practical classes: | **28** |
| 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 | 5 | - |
| Preparation time for seminars / practical classes, study themes, reviews, portfolio and essays | 5 | - |
| Tutorship | 2 | - |
| Examinations | 2 | - |
| Other activities |  | - |
| 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 | - |
| 4.2. of competences | - |

5. **Conditions (where applicable)**

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| 5.1. for lectures | - |
| 5.2. for seminars / practical classes | 1. Physical therapy room equipped with specialized equipment (massage tables, trellis, mattresses, medicine balls, weights, elastic bands, etc.), writing tables, video projector, laptop.2. Medical equipment (medical blouse and pants) and medical clogs. |

**6. Specific competences acquired**

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| **Professional competencies** | **C1.3** | Creation and application of specific physical therapy exercises for each joint correlated with the fundamental and derived positions. |
| **C1.4** | The use of appropriate methods and techniques to increase joint mobility, muscle strength, muscle resistance and speed in order to increase their quality of life. |

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

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| 7.1. General objective | General and specialized knowledge in the field of movement pedagogy to allow the understanding, analysis and conception of new knowledge in this field, as well as familiarization with the professional activities carried out, with the specialized pedagogical language, by defining the fundamental concepts of the theory and methodology of the training, respectively the theory and assessment methodology; |
| 7.2. Specific objectives | Ability to take over and interpret some information from the field of movement pedagogy (clinical data, physiological parameters, etc.) in order to support, make decisions and put into practice some principles and ideas from this field; carrying out specific exercises to increase the quality of life. |

**8. Contents**

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| **8.2. Practical activities - practical class**  | **Teaching methods** | **Observations** |
| 1 | The definition of the pedagogical movement, field-specific terminologies, classifications, concepts of movement pedagogy. | Ppt presentation, video presentations, interactive discussions and practical demonstrations. | 2 h |
| 2 | Rules for writing and performing exercises in medical gymnastics | 2 h |
| 3 | Creating exercise plans for the upper limbs | 2 h |
| 4 | Making exercise plans for the lower limbs | 2 h |
| 5 | Creating exercise plans for the spine in the sagittal plane. | 2 h |
| 6 | Realization of exercise plans for the spine in the frontal plane | 2 h |
| 7 | Realization of exercise plans for the vertebral column in the transverse plane | 2 h |
| 8 | Making exercise plans to increase endurance | 2 h |
| 9 | Making exercise plans to improve the skill | 2 h |
| 10 | Making exercise plans to improve speed | 2 h |
| 11 | Making exercise plans for strength development | 2 h |
| 12 | Realization of exercise plans for the development of aerobic exercise capacity | 2 h |
| 13 | Creating exercise plans for the development of anaerobic exercise capacity | 2 h |
| 14 | Making exercise plans using your own body weight | 2 h |

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| **8.3. Bibliography:** |
| ***Mandatory:*** |
| 1. LP support from the UMF Iasi e-learning platform
2. Rotariu Mariana, Ionite Andrei-Cătălin. Movements of the spine correlations between landmarks and effectors. Editura Discobolul, București, 2018, ISBN: 978-606-798-060-8
3. Joseph E. Muscolino. Kinesiology. The skeletal system and muscle function. 2nd Edition. Elsevier. St. Louis, Missouri, 2011, ISBN: 978-0-323-06944-1
 |
| 1. Terry J. Housh et all. Introduction to exercise science. Fifth edition. Routledge Taylor & Francis Group. 2018. ISBN 978-1-315-17767-0
2. James Watkins. Biomecanics. Laboratory and field excercises in sport and exercise. Routledge Taylor & Francis Group. 2018. ISBN 978-1-315-30631-5
3. Paul Laursen, Martin Buchheit. Science and application of High-intensity interval training. Human Kinetics. 2019. ISBN 978-1-4925-5212-3
4. David G. Behm. The science and physiology of flexibility and stretching. Implications and applications in sport performance and health. Routledge. Taylor & Francis Group. NY. 2019. ISBN 978-1-315-11074-5
5. Shaun Philips. Fatigue in sport and exercise. Taylor & Francis Group. NY. 2015. ISBN 978-1-315-81485-8
6. Kazuyuki Kanosue et all. Physical activity exercise, sedentary behavior and health. Springer. Japan. 2015 ISBN 978-4-431-55333-510.

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| ***Elective:*** |
| 1. Albert I. King. The biomechanics of impact injury. Biomechanical response, mechanisms of injury, human tolerance and simulation. Springer International Publishing AG 2018 ISBN 978-3-319-49792-1
2. Mansfield Neumann. Essentials of kinesiology for the physical therapist assistant. Elsevier INC, St. Louis Missouri, 2014 ISBN: 978-0-323-08944-9
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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:* Practical and theoretical knowledge related to medical gymnastics.
* Practical and theoretical knowledge related to the implementation of exercise plans.
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| Date | Holder of course / signature, | Holder of practical activities / signature, |
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12.09.2024 Lecturer Cătălin Ionițe, PhD

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