**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 | | | | **a. Hand in Rheumatic pathology** | | **RE1320** |
| 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 | **III** | 2.5. Semester | **1** | 2.6. The type of assessment | **Colloquium, C1** | |
| 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 | **1** |  | | **1** | | | |
| Semester 2 | **14** |  | |  | | | |
| 3.4. Total number of learning hours: |  | 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 | | | | | 2 |  | |
| Examinations | | | | | 2 |  | |
| 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, Physiology, Massage |
| 4.2. of competences | Knowledge of the fundamental concepts of anatomy, physiology and massage |

5. **Conditions (where applicable)**

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| 5.1. for lectures | Video logistics support. |
| 5.2. for seminars / practical classes | Students need protective equipment |

**6. Specific competences acquired**

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| **Professional competencies** | **C 1.4** | The use of appropriate parameters in techniques to increase joint mobility, muscle strength, coordination, balance, and special hand recovery techniques. |
| **C 4.3** | The application of electrotherapy, phototherapy, magnetotherapy, ultasonotherapy procedures, adapted to the hand region, especially recovery methods from rheumatic pathology. |

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

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| 7.1. General objective | Acquiring basic knowledge related to hand recovery techniques useful to the physiotherapist. |
| 7.2. Specific objectives | Acquiring basic knowledge about the main hand recovery techniques (mechanisms of action, indications, contraindications). |

**8. Contents**

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| **8.2. Practical activities - laborator** | | **Teaching methods** | **Observations** |
| 1 | Functional anatomy and biomechanical principles of the hand. | Power Point presentation and interactive discussions  Presentations of clinical cases | 2 hours |
| 2 | Clinical and functional assessment of the hand. | 2 hours |
| 3 | Rheumatoid and pathological hand. | 2 hours |
| 4 | Principles of general treatment and physiotherapy. | 2 hours |
| 5 | Manual techniques of orthopedic physiotherapy in improving mobility and pain | 2 hours |
| 6 | Therapeutic physical exercises for hand strength and mobility | 2 hours |
| 7 | Electrotherapy in specific applications for the hand | 2 hours |

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| **8.3. Bibliography:** |
| ***Mandatory:*** |
| 1. Practical working from e-learning platform 2. Sardaru D, Onu I, Matei D. Evaluarea amplitudinilor articulare, Ed Gr T. Popa, Iasi 2021. 3. Norkin CC, White DJ, Measurement of joint motion. A guid to goniometry, 5th ed., F.A. Davis Company, Philadelphia, 2016. 4. Clarkson HM. Musculoskeletal assessment. Joint motion and Muscle Testing. 3rd ed., Wolter Kluwer/Lippincott, Philadelphia, 2013. 5. Firestein GS, Budd RC, Gabriel SE, Kelly’s Textbook of Theumatology, 9th ed., Elsevier Saunders, 2012. |
| ***Elective:*** |
| 1. Guyton and Hall Textbook of Medical Physiology, John Hall, 13th edition, Elsevier Health Sciences, May 31, 2015 2. Muscolino JE, Kinesiology. The sceletal system and muscle function, 2bd ed., Elsevier Mosby, Missouri, 2011 |

**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:   * Knowledge of the main functional electrical stimulation techniques, their indications, contraindications and effects. | | | |

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| Date | Holder of course / signature, | Holder of practical activities / signature, |
| 13.09.2023 |  | Lecturer Dragos Sardaru, PhD |

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| Date of approval in the Department Council/Teaching Council, | | |
| 14.09.2023 |  | Department director / signature, |
|  |  | Associate Professor Daniela-Viorelia Matei, MD, PhD |