**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** | | | | | | | | |
| **2.1.** | **Subject: Hydrothermotherapy RE1212** | | | | | | | |
| **2.2.** | **Module leader:** Associate professor Mariana Rotariu, Ph-D | | | | | | | |
| **2.3.** | **Seminar leader:** Assist drd. Avram iustina | | | | | | | |
| **2.4. Year of study** | | **II** | **2.5. Semester in which is taught** | **2** | **2.6. Evaluation type** | 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** | 2 | **3.2. Courses number of hours / week** | 1 | **3.3. practical classes/ clinical training** | 1 |
| **3.4. Total number of learning hours** | 28 | **3.5. Courses** | 14 | **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** | | | | | 8 |
| **Supplementary documentation in the library, using specialized platforms via internet and by field work** | | | | | 10 |
| **Preparation for seminars / practical classes, study themes, reviews, portfolio, and essays** | | | | | 4 |
| **Tutorship** | | | | | 2 |
| **Examinations** | | | | | 2 |
| **Other activities (clinical session)** | | | | |  |
| **3.8. Total hours of individual study** | | | | | 22 |
| **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, Physiology, Pathophysiology |
| **4.2.** of competences | Knowledge of communication mechanisms morpho-functional unit of living matter with the extracellular environment |

1. **Conditions (where applicable)**

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| **5.1.** for lectures | Video logistical support. Recovery Clinic Hospital amphitheater Iasi |
| **5.2.** for seminars / practical classes | Based Clinical Hospital Rehabilitation treatment Iasi |

1. **Specific competences acquired**

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| Professional competences (expressed as knowledge and abilities) | C3.1 Identify physiological mechanisms of thermoregulation, thermal factors effect on equipment and human body; hydro techniques (HTT) with indications contraindications and precautions. C3.2 Use knowledge regarding proper procedures for the election of a hydro therapy strategies C3.3 Assessment and integration HTT procedures according to the type of pathology and objectives. C 3.4 Evaluation parameters appropriate application of all forms of HTT establishing associations between opportunity and schedule procedures C3.5 development and developing new protocols HTT |
| Transverse competences (of role, of professional development, personal) | Identifying roles and responsabilities in a multidisciplinary team.  Application of relationship techniques.  Efficiency in teamwork and in patient relationship Fulfillment in terms of efficiency and effectiveness for organizing tasks and activities specific to physical therapy interventions |

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

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| **7.1.** General objective | Familiarizing students with various techniques and methods of balneology |
| **7.2.** Specific objectives | Theoretical and practical knowledge of natural and artificial physical factors, the techniques and methods used in balneology recovery rheumatologic disorders, posttraumatic, neurological, cardiovascular and respiratory. |

1. **Contents**

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| **8.1. Lecture** | **Teaching methods** | **Observations** |
| 1 Mineral waters used in hydrotherapy: definition, mode of action, physicochemical characteristics, classification | PPT presentation | 2 hours |
| 2 Oligomineral, alkaline, chlorosodic waters: definition, mode of action in external and internal treatment, indications, contraindications, spas | PPT presentation | 2 hours |
| 2 Carbonated, sulphurous, sulphate, radioactive waters: definition, mode of action in external and internal treatment, indications, contraindications, spas | PPT presentation | 2 hours |
| 3 Hydrotherapy: definition, concepts thermoregulation mode of action in general and local application | PPT presentation | 2 hours |
| 4 Hidro-termo-therapy local and general procedures: definition, methods of application, particularities of action, indications and contraindications | PPT presentation | 2 hours |
| 5 Cryotherapy: definition, mode of action, methods of application, indications and contraindicationTop of FormBottom of Form | PPT presentation | 2 hours |
| 6 Thermotherapy: definition, mode of action, methods of application, indications and contraindications | PPT presentation | 2 hours |
| 7. The role of the physical therapist in the program of hydro-kinetotherapy | PPT presentation | 2 hours |
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| **8.2. Seminar / practical classes** | **Teaching methods** | **Observations** |
| 1 General aspects regarding the practical application of hydrokinetotherapy | Practical applications | 4 hours |
| 3 Musculoskeletal system | Practical applications | 2 hours |
| 4 Hydrotherapy - mode of action, implementing measures, contraindications | Practical applications | 2 hours |
| 5 Thermoregulation | Practical applications | 2 hours |
| 6 Cryotherapy - mode of action, implementing measures, contraindications | Practical applications | 2 hours |
| 7 Thermotherapy - mode of action, implementing measures, contraindications |  |  |
|  | | |
| **Bibliography**   1. Elena Lumința Sidenco: Medicina Fizică în Recuperarea Medicală, Ed Universitară „Carol Davila” București ,2005 2. Delia Cinteza: Recuperarea medicală, Ed Vox, București, 2003 3. Andrei Rădulescu, Elena Teodoreanu: Fizioterapie – masaj terapeutic, Ed Medicală, București, 2002 4. Nicolae Teleki: Cura balneoclimatică în România, Ed Sport-Turism București, 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** | Acquiring theoretical aspects and concepts presented in the course | Written exam | 50% |
| **Seminar/practical classes** | Practical works topics | Colloquium for practical work | 40% |
| Activity during the semester |  | 10% |
| **Minimal performance standard:**  **- Knowing the basic notions for Exploration and evaluation methods in medical rehabilitation** | | | |

**Date: Signature of head of discipline**

23.09.2019 Associate professor Mariana Rotariu, Ph-D

Assist. drd. Avram Iustina

**Department approval date**

30.09.2019 **Signature of department director**

Lecturer Daniela-Viorelia Matei, Ph-D