**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 | | | | **Hydrothermotherapy** | | **RE1203** |
| 2.2. Teaching staff in charge with lectures | | | | **Associate Professor Constantin Munteanu, PhD** | | |
| 2.3. Teaching staff in charge with practical activities | | | | **Associate Professor Constantin Munteanu, PhD** | | |
| 2.4. Year of study | **II** | 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** | **1** | | **1** | | | |
| Semester 2 |  |  | |  | | | |
| 3.4. Total number of learning hours: | **28** | 3.5. Of which: Courses | **14** | 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 | | | | | 10 |  | |
| Supplementary documentation in the library, using specialised platforms via internet and by field work | | | | | 6 |  | |
| Preparation time for seminars / practical classes, study themes, reviews, portfolio and essays | | | | | 6 |  | |
| 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 | Anatomy, Physiology |
| 4.2. of competences | Knowledge of the communication mechanisms of living matter with the extracellular environment |

5. **Conditions (where applicable)**

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

**6. Specific competences acquired**

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| **Professional competencies** | **C.3.3** | Knowledge, evaluation and integration of hydrothermotherapy (HTT) procedures according to the type of pathology and objectives, identification of hydrothermotherapy techniques with indications, contraindications and precautions. |
| **C.3.4** | Evaluation parameters appropriate application of all forms of HTT establishing associations between opportunity and schedule procedures  Evaluation and integration of HTT procedures according to the type of pathology and objectives. |

7**.** **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 hydrothermotherapy |
| 7.2. Specific objectives | Theoretical and practical knowledge of natural and artificial physical factors, the techniques and methods used in hydrothermotherapy for rheumatologic disorders, posttraumatic, neurological, cardiovascular, and respiratory pathology. |

**8. Contents**

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| **8.1. Lectures** | | **Teaching methods** | **Observations** |
| 1 | Hydrothermotherapy, the role of water in the human body's health, the basics and history of hydrothermotherapy. Hydrothermotherapeutic reaction. | PPT presentation | 2 hours |
| 2 | Techniques for applying hydrothermotherapy - compresses, hydrophores, poultices and packaging - definition, mode of action, methods of application, indications, and contraindications | PPT presentation | 2 hours |
| 3 | Techniques for applying hydrothermotherapy - frictions, brushing, washing, affusions - definition, mode of action, methods of application, indications, and contraindications | PPT presentation | 2 hours |
| 4 | Techniques for applying hydrothermotherapy - baths, hydrocolono therapy, underwater showers, emotional showers - definition, mode of action, methods of application, indications, and contraindications | PPT presentation | 2 hours |
| 5 | Sauna - definition, mode of action, methods of application, indications, and contraindications | PPT presentation | 2 hours |
| 6 | Cryotherapy and Cryosauna - definition, mode of action, methods of application, indications, and contraindications | PPT presentation | 2 hours |
| 7 | Hydrokinetic therapy - Aqua gym. The role of hydrothermotherapy in medical rehabilitation | PPT presentation | 2 hours |

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| **8.2. Practical activities - practical class** | | **Teaching methods** | **Observations** |
| 1 | General rules for practicing hydrothermal therapy. | Practical applications | 2 hours |
| 2 | Classification of hydrothermal therapy procedures. | 2 hours |
| 3 | Compresses, hydrophores, poultices, and packaging - examples, practical importance | 2 hours |
| 4 | Rubbing, brushing, washing, affusion hydrothermotherapeutic procedures - examples, practical importance. | 2 hours |
| 5 | Sauna - examples, practical importance | 2 hours |
| 6 | Cryotherapy, Cryosauna - examples, practical importance | 2 hours |
| 7 | Hydrothermal zones in Treatment bases / Spa and Wellness | 2 hours |

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| **8.3. Bibliography:** |
| ***Mandatory****:* |
| 1. Course materials and practical works posted on the e-learning platform of UMF "Grigore T Popa" Iasi 2. Constantin Munteanu, Mariana Rotariu, Mihaela-Iustina Condurache – Balneoclimatologie, Editura Universității „Grigore T. Popa” Iași, 2021 3. Barbara J. Behrens - Physical agents: theory and practice, Holly Beinert. — Third edition., 2014 ISBN 978-0-8036-3816-7 4. Anne Williams - SPA BODYWORK, A Guide for Massage Therapists, 2nd edition 2015, Wolters Kluwer /Lippincott & Williams, ISBN: 9781451176780 |
| ***Elective:*** |
| *•* MUNTEANU Constantin, Delia Cinteză - Cercetarea ştiinţifică a factorilor naturali terapeutici, Bucureşti : Editura Balneară, 2011, ISBN 978-606-92826-8-7;  • MUNTEANU Constantin – Hidratarea, Bucureşti : Editura Balneară, 2013, ISBN 978-606-93550-2-2  • MUNTEANU Constantin - Ape minerale terapeutice,- Bucureşti : Editura Balneară, 2013, ISBN 978-606-93550-6-0  • MUNTEANU Constantin - Apa Rol Biologic : Testament acvatic : Balneologie, Bucureşti : Editura Balneară, 2020, ISBN 978-606-8705-14-9 |

**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 | 80 % |
| Practical activities | Activities carried out in laboratory and conducted quality essays. | Colloquium practical activity | Admitted/ Rejected |
| 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 hydrothermotherapy techniques and methods used in the recovery of rheumatological, post-traumatic, neurological, cardiovascular and respiratory conditions | | | |

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| Date | Holder of course / signature, | Holder of practical activities / signature, |
| 14.09.2024 | Associate Professor Constantin Munteanu, PhD | Associate Professor Constantin Munteanu, PhD |

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