**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 | | | | **Phytotherapy** | | **RE1330** |
| 2.2. Teaching staff in charge with lectures | | | | **Lecturer Marin Zagnat, PhD** | | |
| 2.3. Teaching staff in charge with practical activities | | | | **Lecturer Marin Zagnat, PhD** | | |
| 2.4. Year of study | **III** | 2.5. Semester | **0** | 2.6. The type of assessment | **Colloquium, C2** | |
| 2.7. Discipline type | | **Facultative** | | **0** | | |

**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 | | | | | 5 |  | |
| 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 | | | | | 5 |  | |
| Tutorship | | | | | 2 |  | |
| Examinations | | | | | 2 |  | |
| Other activities | | | | | 6 |  | |
| 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 | Logistic support - video projector |
| 5.2. for seminars / practical classes | Specific chemistry laboratory glassware. Materials, solvents and specific equipment. The students will have protective equipment |

**6. Specific competences acquired**

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| **Professional competencies** | **C 1.1** | Description of concepts, theories and fundamental notions of physiological and pathological mechanisms of the human locomotor system, recognition of clinical symptoms and signs, identification of phytotherapeutic treatment methods and techniques |
| **C 1.2** | The use of basic knowledge to explain and interpret the opportunity of prescriptions adapted to the region treated and the type of pathology |

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

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| 7.1. General objective | Introduction to concepts and technologies in the field of Phytotherapy. Presentation of promising Herbal drugs for Physio-kinetotherapy and rehabilitation and their medical uses. |
| 7.2. Specific objectives | - Accumulation of basic knowledge about concepts and technologies in the field of herbal remedies.  - Endowment of the students with specific skills for organize of the experiment and the knowledge of procedures for obtaining of phytotherapeutical remedies. |

**8. Contents**

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| **8.1. Lectures** | | **Teaching methods** | **Observations** |
| 1 | Alternative Therapies. The general notions in Phytotherapy. Types of herbal remedies. | Interactive lectures,  discussion, explanations | 2 hours |
| 2 | Anti-inflammatory herbal drugs with broad therapeutic potential | Interactive lectures,  discussion, explanations | 2 hours |
| 3 | Vegetable products with healing properties. | Interactive lectures,  discussion, explanations | 2hours |
| 4 | Herbal drugs with antimicrobial action | Interactive lectures,  discussion, explanations | 2 hours |
| 5 | Herbs in Massage, Sauna and Bath | Interactive lectures,  discussion, explanations | 2 hours |
| 6 | The essential oils used in Phytotherapy and Aromatherapy. | Interactive lectures,  discussion, explanations | 2 hours |
| 7 | The essential oils in Massage, Sauna and Bath | Interactive lectures,  discussion, explanations | 2 hours |

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| **8.2. Practical activities - 0** | | **Teaching methods** | **Observations** |
| 1 | The general notions in Phytotherapy. Types of herbal remedies. Aqueous extractive solutions. Obtaining and characterisation | Carrying out analyzes, obtaining and processing experimental data. Presentation of the conclusions. | 1 hours |
| 2 | Extractive hydroalcoholic solutions. Tinctures. Methods of obtaining and characterisation |  | 2 hours |
| 3 | Extracts. Concentrated extractive solutions. Methods of obtaining and characterisation |  | 2 hours |
| 4 | The complex medicinal plant remedies. The principles of preparation |  | 2 hours |
| 5 | Extraction of Essential Oils and Steam distillation. Characterization of the obtained oils |  | 4 hours |
| 6 | Preparation of the massage oils based on plant extracts and essential oils |  | 4 hours |

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| **8.3. Bibliography:** |
| ***Mandatory:*** |
| **Pharmacognosy. Fundamentals, Applications and Strategy**, Simone Badal, Rupika Delgoda, Elsevier Inc., 2017   |  | | --- | | **Herbal Biomolecules in Healthcare Applications,** Ed.Subhash C. Mandal, Amit Kumar Nayak, Amal Kumar Dhara, Academic Press, Elsevier Inc., 2022 |   **Selective:**  **Natural Products and Drug Discovery,** Subhash C. Mandal, Vivekananda Mandal, Tetsuya Konishi, Elsevier, 2018  **Herbs, Spices and Their Roles in Nutraceuticals and Functional Foods**, Augustine Amalraj, Sasikumar Kuttappan, Karthik Varma A.C., Academic Press, Elsevier 2023 |

**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:   * Knowing at least 3 herbal products from each therapeutic group | | | |

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| Date | Holder of course / signature, | Holder of practical activities / signature, |
| 14.09.2023 |  |  |

Lecturer Marin Zagnat, PhD Lecturer Marin Zagnat, 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 |