**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:** Phytotherapy | | | | | | | |
| **2.2.** | **Module leader:** Lecturer Marin Zagnat | | | | | | | |
| **2.3.** | **Seminar leader:** Lecturer Marin Zagnat | | | | | | | |
| **2.4. Year of study** | | **3** | **2.5. Semester in which is taught** | **2** | **2.6. Evaluation type** | C | **2.7. Subject status** | Elective |

1. **Estimated total time (hours/semester of didactic activity)**

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| **3.1.Number of hours / week** | 1 | **3.2. Courses number of hours / week** | 0,5 | **3.3.Seminar / l practical classes** | 0,5 |
| **3.4. Total number of learning hours** | 14 | **3.5. Courses** | 7 | **3.6. Seminar / practical classes** | 7 |
| **3.7. Distribution of the available time** | | | | | Hours |
| **Study based on the manual, lecture support, bibliography and hand notes** | | | | | 18 |
| **Supplementary documentation in the library, using specialised platforms via internet and by field work** | | | | | 16 |
| **Preparation for seminars / practical classes, study themes, reviews, portofolio, and essays** | | | | |  |
| **Tutorship** | | | | |  |
| **Examinations** | | | | | 2 |
| **Other activities** | | | | |  |
| **3.8. Total hours of individual study** | | | | | 36 |
| **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 |  |
| **4.2.** of competences |  |

1. **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 |

1. **Specific competences acquired**

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| Professional competences (expressed as knowledge and abilities) | - Experience in concepts and techniques of Phytotherapy. Knowledge of the promising Herbal drugs for Physio-kinetotherapy and rehabilitation and their medical uses.  The ability for obtaining of most usual phytotherapeutic remedies. |
| Transverse competences (of role, of professional development, personal) | The ability of students to work in groups, to consult the scientific literature and organize the experiment for obtaining the necessary data; |

1. **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. |

1. **Contents**

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| **8.1. Lecture** | **Teaching methods** | **Observations** |
| Alternative Therapies. The general notions in Phytotherapy. Types of herbal remedies. | Interactive lectures,  discussion, explanations | 1 hours |
| Anti-inflammatory herbal drugs with broad therapeutic potential | Interactive lectures,  discussion, explanations | 1 hours |
| Vegetable products with healing properties. | Interactive lectures,  discussion, explanations | 1hours |
| Herbal drugs with antimicrobial action | Interactive lectures,  discussion, explanations | 1 hours |
| Herbs in Massage, Sauna and Bath | Interactive lectures,  discussion, explanations | 1 hours |
| The essential oils used in Phytotherapy and Aromatherapy. | Interactive lectures,  discussion, explanations | 1 hours |
| The essential oils in Massage, Sauna and Bath | Interactive lectures,  discussion, explanations | 1 hours |
| **Bibliography**  **mandatory**  **Pharmacodynamic basis of herbal medicine,** Manuchair Ebadi, 2nd ed., CRC Press-Taylor & Francis Group, Boca Raton, 2007  **selective**  **The handbook of clinically tested herbal remedies,** Marilyn Barrett, vol.1 and 2, The Haworth Press, 2004  **Herbal Drugs: Ethnomedicine to Modern Medicine,** K.G. Ramawat, Springer-Verlag, Berlin Heidelberg, 2009 | | |
| **8.2. Seminar / practical classes** | **Teaching methods** | **Observations** |
| 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 |
| Extractive hydroalcoholic solutions. Tinctures. Methods of obtaining and characterisation |  | 1 hours |
| Extracts. Concentrated extractive solutions. Methods of obtaining and characterisation |  | 1 hours |
| The complex medicinal plant remedies. The principles of preparation |  | 1 hours |
| Extraction of Essential Oils and Steam distillation. Characterization of the obtained oils |  | 2 hours |
| Preparation of the massage oils based on plant extracts and essential oils |  | 2 hours |
| **Bibliography**  **mandatory**  **Separation processes In the food and Biotechnology Industries. Principles and Applications,**   1. *S. Grandison, M. J. Lewis ,* Woodhead Publishing Ltd, 1996   **selective**  **Bioactive compounds from natural sources : isolation, characterisation, and biological properties**, *Corrado Tringali, Taylor & Francis, 2001*  ***Farmacopeea Romana ed. X*,** *Edit. Medicala, Bucuresti, 1993* | | |

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** | Note from the unique examination sheet | multiple choice exam | 50% |
| **Seminar/practical classes** | Average of marks obtained during the semester | periodic evaluation | 10% |
| Note from the practical examination | practical examination | 40% |
| **Minimal performance standard:** Knowing at least 3 herbal products from each therapeutic group | | | |

**Date of completion: Signature of head of discipline**

20.01.2017 Lecturer Marin Zagnat

**Department approval date**

30.01.2017 **Signature of department director**

Lecturer Daniela-Viorelia Matei, Ph-D