

Course Unit	Phytotherapy Bases	Field of study	Life Sciences/Pharmaceutical Sciences		
Master in	Natural Products and Bioprospecting	School	School of Agriculture		
Academic Year	2023/2024	Year of study	1	Level	2-1
Type	Semestral	Semester	2	ECTS credits	6.0
Workload (hours)	162	Contact hours	T -	TP 30	PL 30
			TC -	S -	E -
			OT 4	O -	
			Code 5012-740-1201-00-23		

T - Lectures; TP - Lectures and problem-solving; PL - Problem-solving, project or laboratory; TC - Fieldwork; S - Seminar; E - Placement; OT - Tutorial; O - Other

Name(s) of lecturer(s) Maria João Almeida Coelho Sousa, Jose Carlos Goncalves Maduro

### Learning outcomes and competences

At the end of the course unit the learner is expected to be able to:

1. Master the most important principles and practice of phytotherapy. and to identify species and botanical families yielding important phytochemicals
2. To know the demanded criteria of quality, safety and efficacy of phytotherapeutic products. To master the parameters of quality control and standardization of raw materials of plant origin
3. To identify production processes and to know how to get raw materials of plant origin in order to prepare phytomedicines
4. To learn the methods for the most suitable elaboration of the galenic preparations and the more used dosage forms and vegetable preparations employed in herbal medicine
5. To understand herbal approaches to pathological states, dosage and dosage forms in herbal medicine, prescribing, side effects and interaction with conventional drugs, foods, and others
6. To be acquainted and to know how to use the monographs of plants of the OMS, EMEA, ESCOP and Commission E, as well as, the main databases related with medicinal plants
7. To analyze and to develop practical clinical guides. To monitor the pharmaceutical quality in a Phytotherapeutic context

### Prerequisites

Before the course unit the learner is expected to be able to:  
Have basic knowledge on pharmacognosy, pharmacology and botany

### Course contents

Phytotherapy principles, objectives and strategies. Medicinal plants and herbal therapeutic systems. Herbal approaches to pathologies and principles of treatments. Prescription. Benefits, side effects and optimizing safety. Overview of medicinal plants uses. Regulation and legislation. The quality control of plant raw materials. Safety and efficacy. Validating herbal therapeutics. Medicinal herbs, forms of preparations. herbal therapeutics. Aromatherapy. Practical clinical guides.

### Course contents (extended version)

1. Principles, objectives and strategies. Essential botanical families and species
2. Herbal therapeutic systems. An overview of present and future medicinal plants uses in therapeutics.
3. Regulation and legislation issues. Quality control of plant raw materials.
  - Criteria of quality, safety and efficacy. Validating and optimizing safety
4. Medicinal herbs, forms of preparations and herbal therapeutics.
  - Infusions, decoctions, macerates, extracts, tinctures, and other dosage forms.
  - Applications of herbal remedies
5. Aromatherapy, basic concepts. Essential oils, and other aromatic compounds
  - Applications, effects, costs and benefits.
  - Essential oils, and other aromatic compounds
6. Herbal approaches to pathologies. Treatments. Prescription. Benefits, side effects and .
7. Rational system for modern Phytotherapy
  - Therapeutic strategy. Perceived causes and critical role of case taking. Practical clinical guides.
  - Treatment framework or protocols

### Recommended reading

1. Bruneton J. Fitoterapia. Zaragoza: Editorial Acribia. 2004
2. Ulbricht C & Seamon E. Natural Standard Herbal Pharmacotherapy: An Evidence-Based Approach. Mosby-Elsevier. 2010
3. Vanaclocha B, Canigual S. (eds). Fitoterapia. Vademecum de Prescripcion. Elsevier. 2019
4. Heinrich, M., Barnes, J., Prieto, J. M., Gibbons, S., Williamson, E. M. Fundamentals of Pharmacognosy and Phytotherapy. Elsevier. 2017
5. WHO monographs on selected medicinal plants. Vol. 1, 2, 3 & 4. World Health Organization. and ESCOP Monographs

### Teaching and learning methods

Theoretical-practical lessons. Exposition of basic concepts and accomplishment of experimental protocols, practical clinical guides, and clinical topics. Each session is preceded by oral presentation of main topics, illustrated with practical examples to increase group discussion and participation. TIC, namely e-learning, and both auditory and visual stimuli are used to promote augmented learning

### Assessment methods

1. Final assessment - (Regular) (Final)
  - Development Topics - 60% (Individual or group report on practice-based activities, oral presentation. Required minimum 8marks)
  - Final Written Exam - 40% (Written exam. Theoretical-practical contents. Minimum requirements 8 marks)
2. Final Assessment - (Student Worker) (Final)
  - Final Written Exam - 100% (Final examination. Written and theoretical-practical contents. Minimum requirements 9, 5 marks)
3. Resit examination - (Regular, Student Worker) (Supplementary, Special)
  - Final Written Exam - 100% (Final examination. Written and theoretical-practical contents. Minimum requirements 9, 5 marks)

### Language of instruction

Portuguese

## Electronic validation

Maria João Almeida Coelho Sousa	Maria José Miranda Arabolaza	Maria João Almeida Coelho Sousa	Paula Cristina Azevedo Rodrigues
16-01-2024	17-01-2024	17-01-2024	18-01-2024