

PHYTOTHERAPY

1. COURSE DESCRIPTION – GENERAL INFORMATION	
1.1. Course teacher	Associate profesor Marijana Zovko Končić
1.2. Associate teachers	
1.3. Graduate programme	Pharmacy integrated study program
1.4. Status of the course	Elective
1.5. Year of study, Semester	4, 8
1.6. Credit value (ECTS)	2,5
1.7. Type of instruction (number of hours L+E+S+e-learning)	15+0+15
1.8. Expected enrolment in the course	30-60
1.9. Level of use of e-learning (1, 2, 3 level), percentage of instruction in the course on line (20% maximum)	3, 20%
2. COURSE DESCRIPTION	
2.1. Course objectives	Students will learn basic principles of interaction of herbal medicines and the human body. They will understand the mechanisms of action, know doses, therapeutic and adverse effects, indications and contraindications of selected phytotherapeutics, as well as learn how to independently search literature. The acquired knowledge and skills are directly applicable to in interaction with patients in the pharmacy.
2.2. Enrolment requirements and required entry competences for the course	Registered eighth semester, passed Pharmacognosy 2, passed Pathophysiology with pathology
2.3. Learning outcomes at the level of the study programme to which the course contributes	<ul style="list-style-type: none"> • Apply expert knowledge and skills to provide advice on pharmacotherapy while respecting the current legal framework • Informing and advising patients on the effects and proper application of pharmaceuticals • Recognize clinically significant interactions of pharmaceuticals and act with the aim of avoiding them • Demonstrate cognitive, analytical and critical skills in the development and implementation of solutions for practical problems and the monitoring of safe and appropriate application of pharmaceuticals • Use information technology and databases for enhancing expert knowledge and skills and self-learning
2.4. Expected learning outcomes at the level of the course (4-10 learning outcomes)	<p>Upon successfully passing the exam the student will be able to</p> <ol style="list-style-type: none"> 1. Differentiate between food supplements and herbal drugs with regard to their intended use and quality control 2. Explain the mechanisms of action of herbal preparation (phytopreparations) 3. Connect chemical composition of phytopreparations with their desired and undesired effects

	4. Describe indications and contraindications of phytopreparations			
	5. Evaluate dosing and duration of use of phytopreparations			
	6. Point to clinically significant interaction of phytopreparations			
	7. Evaluate and compare phytopreparations according to their indications, therapeutic actions, desired-and side-effects			
	8. Advise patients on the appropriate use of herbal drugs and supplements			
	9. Independently search for and critically evaluate available literature			
2.5. Course content broken down in detail by weekly class schedule (syllabus)	<p>LECTURES</p> <ul style="list-style-type: none">• Traditional and modern phytotherapy.• Overview of other alternative/complementary methods of herbal treatments (TCM, Ayurveda, aromatherapy, homeopathy...)• Therapeutic classification and analysis of phytopreparations according to their use, mechanism of action, clinical studies on their efficacy, indications, contraindications, side-effects, interactions and dosing:<ul style="list-style-type: none">• Phytopreparations for central nervous system disorders• Phytopreparations for circulatory system disorders• Phytopreparations for endocrine system disorders• Phytopreparations for urogenital system disorders• Phytopreparations for digestive system disorders• Analgesics and antirheumatics• Phytopreparations for respiratory system disorders• Phytopreparations with antimicrobial activity• Modulators of immune system activity• Use of phytopreparations in treatment of malign diseases• Food supplements in sports• Phytopreparations for use in cosmetics and dermatology <p>SEMINARS</p> <ul style="list-style-type: none">• Legislation of herbal preparations: herbal drugs and food supplements• Difference between herbal drugs and food supplements according to their intended use and quality assurance• Use, package information and advertizing of herbal products in Croatia: examples from practice• The importance of clinical evidence in phytotherapy.• Instructions for the preparation of seminar work (review of available literature)• Presentation of seminars• Case studies			
2.6. Type of instruction	lectures seminars workshops exercises online in entirety mixed e-learning mixed m-learning	field work independent study multimedia and the internet work with the mentor (other)		
2.7. Student responsibilities	Attending lectures and active participation in teaching process. Preparation and presentation of seminar essay			
2.8. Screening of student's work (specify the proportion of ECTS credits for each activity so that the total number of CTS credits is equal to the credit value of the course)	Class attendance		Seminar essay	0.2
	Experimental work		Oral exam	
	Essay		Project	
	Tests	0.5	Practical training	
	Written exam	1.5	(Other--describe)	

	Research	0.3	(Other--describe)	
	Report		(Other--describe)	
2.9. Grading and evaluation of student work over the course of instruction and at a final exam	Continuous follow-up of learning process using online tests Evaluation of seminar essays –review of available literature on selected topic			
2.10. Required literature (available at the library and via other media)	Title		Number of copies at the library	Availability via other media
	Marijana Zovko Končić: Lectures and seminars from phytotherapy			
	Catherine Ulbricht, Natural Standard Herbal Pharmacotherapy: An Evidence-Based Approach, 1 edition Mosby; (2009)			
	Kerry Bone, Simon Mills, Principles and Practice of Phytotherapy: Modern Herbal Medicine 2 edition, Churchill Livingstone (2013)			
2.11. Optional literature	Michael Heinrich, Joanne Barnes, Simon Gibbons, Fundamentals of Pharmacognosy and Phytotherapy, 2 edition, Churchill Livingstone; (2012)			
	Robert Alan Bonakdar, The H.E.R.B.A.L. Guide: Dietary Supplement Resources for the Clinician Lippincott Williams & Wilkins; 1 Pap/Psc edition (2010)			
2.12. Methods of monitoring quality that ensure acquisition of exit competences	All learning outcomes are checked by written exam, continuous online follow-up, as well as by means of seminar essays.			
2.13. Comments				