

	<b>UČNI NAČRT PREDMETA/COURSE SYLLABUS</b>
<b>Predmet</b>	<b>Priprava in aplikacija fitoterapevtskih pripravkov</b>
<b>Course title</b>	<b>Preparation and Application of Phytotherapeutic Concoctions</b>

<b>Študijski program in stopnja</b> <b>Study programme and level</b>	<b>Študijska smer</b> <b>Study field</b>	<b>Letnik</b> <b>Academic year</b>	<b>Semester</b> <b>Semester</b>
Fitoterapija/I. stopnja	Ni smeri študija	3.	5.
Phytotherapy/I <sup>st</sup> level	No specific field	3 <sup>rd</sup>	5 <sup>th</sup>

<b>Vrsta predmeta/Course type</b>	obvezni/obligatory
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<b>Univerzitetna koda predmeta/University course code</b>	FIT_3_UN4
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<b>Predavanja</b> <b>Lectures</b>	<b>Sem. vaje</b> <b>Tutorial</b>	<b>Kab. vaje</b> <b>Cabinet tutorial</b>	<b>Lab. vaje</b> <b>Laboratory work</b>	<b>Teren. vaje</b> <b>Field work</b>	<b>Samost. delo</b> <b>Individ. work</b>	<b>ECTS</b>
40	20		40		100	8

<b>Nosilec predmeta/Lecturer:</b>	dr. Aleš Mlinarič, viš. pred. Učni načrt pripravila: Sabina Repše, pred.
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<b>Jeziki/</b> <b>Languages:</b>	<b>Predavanja/Lectures:</b>	slovenski/Slovenian
	<b>Vaje/Tutorial:</b>	slovenski/Slovenian

<b>Pogoji za vključitev v delo oz. za opravljanje študijskih obveznosti:</b>	<b>Prerequisites:</b>
<ul style="list-style-type: none"> <li>• Vpis v tretji letnik študijskega programa.</li> <li>• Študent mora pred izpitom pripraviti in predstaviti seminarsko nalogo.</li> </ul>	<ul style="list-style-type: none"> <li>• The prerequisite for inclusion is enrolment in the third year of study.</li> <li>• Students have to successfully prepare and present a seminar paper before the examination.</li> </ul>

<b>Vsebina:</b>	<b>Content (Syllabus outline):</b>
<ul style="list-style-type: none"> <li>• Osnove farmacevtske tehnologije.</li> <li>• Poznavanje osnov dobre proizvodne prakse (DPP).</li> <li>• Poznavanje materialov, naprav in osnovnih tehnoloških postopkov v proizvodnji farmacevtskih oblik v lekarniškem, galenskem in industrijskem obsegu.</li> <li>• Farmacevtska embalaža, zahtevki in razdelitev.</li> <li>• Farmacevtski pripravki:</li> </ul>	<ul style="list-style-type: none"> <li>• Basics of pharmaceutical technology.</li> <li>• Knowledge of good manufacturing practice (GMP) basics.</li> <li>• Knowledge of materials, devices and basic technological procedures in the production of pharmaceutical forms in pharmacy, galenic and industrial scale.</li> <li>• Pharmaceutical packaging, norms and classifications.</li> </ul>

<ul style="list-style-type: none"> <li>○ dermalni pripravki,</li> <li>○ tekoče zdravilne oblike,</li> <li>○ sterilne farmacevtske oblike,</li> <li>○ pripravki rastlinskega izvora,</li> <li>○ novejši dostavni sistemi.</li> </ul> <ul style="list-style-type: none"> <li>● Načini aplikacije različnih farmacevtskih pripravkov: <ul style="list-style-type: none"> <li>○ dermalni pripravki,</li> <li>○ pripravki za oči,</li> <li>○ trdni pripravki,</li> <li>○ rektalne in vaginalne farmacevtske oblike.</li> </ul> </li> </ul> <p>Priprava enostavnejših farmacevtskih pripravkov v laboratorijskem okolju (krema, praški, emulzija, tinktura, čajna mešanica),</p> <ul style="list-style-type: none"> <li>● Načini aplikacije.</li> <li>● Pregled zakonodaje in predpisov, ki veljajo na področju farmacevtski pripravkov</li> </ul> <p>Vaje</p> <ul style="list-style-type: none"> <li>● pregled in spoznavanje laboratorijske opreme, opreme za določevanje vsebnosti,</li> <li>● pregled in spoznavanje opreme in aparatur za pripravo farmacevtskih pripravkov,</li> <li>● pregled razdelitev in določil za embalažo za farmacevtske pripravke, primeri za embaliranje posameznih farmacevtskih pripravkov,</li> <li>● prikaz priprave čajne mešanice,</li> <li>● izdelava dekokta,</li> <li>● izdelava macerata,</li> <li>● izolacija eteričnega olja z destilacijo,</li> <li>● priprava tinkture,</li> <li>● prikaz izdelave aseptičnih farmacevtskih pripravkov,</li> <li>● izdelava dermalnih farmacevtskih pripravkov,</li> <li>● izdelava tekočih farmacevtskih pripravkov,</li> <li>● izdelava poltrdnih farmacevtskih pripravkov,</li> </ul>	<ul style="list-style-type: none"> <li>● Pharmaceutical compounds: <ul style="list-style-type: none"> <li>○ dermal compounds,</li> <li>○ liquid medicinal forms,</li> <li>○ sterile medicinal forms,</li> <li>○ herbal compounds,</li> <li>○ novel delivery systems.</li> </ul> </li> <li>● Ways of application for different pharmaceutical compounds: <ul style="list-style-type: none"> <li>○ dermal compounds,</li> <li>○ compounds for the eyes,</li> <li>○ solid compounds,</li> <li>○ rectal and vaginal pharmaceutical forms.</li> </ul> </li> <li>● Preparation of simple pharmaceutical compounds in the laboratory environment (cream, powder, emulsion, tincture, tea mixture),</li> <li>● Ways of application.</li> <li>● Overview of legislation and regulations that concern pharmaceutical compounds.</li> </ul> <p>Tutorial</p> <ul style="list-style-type: none"> <li>● compounds,</li> <li>● introduction to laboratory equipment and tools for assay determination,</li> <li>● introduction to tools and instruments for preparation of pharmaceutical compounds,</li> <li>● examination of classifications and stipulations regarding the packaging of pharmaceutical compounds, examples of packaging for different pharmaceutical compounds,</li> <li>● demonstration of herbal tea mixture preparation,</li> <li>● preparation of a decoction,</li> <li>● preparation of a macerate,</li> <li>● isolation of an etheric oil, using a distillation procedure,</li> <li>● preparation of a tincture,</li> <li>● demonstration of preparation of an aseptic pharmaceutical compound,</li> <li>● preparation of a dermal pharmaceutical compound,</li> </ul>
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<ul style="list-style-type: none"> <li>• prikaz izračuna in priprave praškov,</li> <li>• načini aplikacije z osnovami masaže.</li> </ul>	<ul style="list-style-type: none"> <li>• preparation of a liquid pharmaceutical compound,</li> <li>• preparation of a semi-solid pharmaceutical compound,</li> <li>• demonstration of a powder form preparation and related calculations,</li> <li>• ways of application and basics of massage.</li> </ul>
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### **Temeljna literatura in viri/Readings:**

#### **Temeljna literatura/Basic literature**

- Šmid-Korbar, J., Srčič. S. in Kristl J. (1986). Oblikovanje zdravil. Slovensko farmacevtsko društvo.

#### **Priporočljiva literatura/Recommended literature**

- Izbrani članki iz zbornikov znanstvenih srečanj, izbrani članki iz domačih in tujih znanstvenih revij s področja farmacevtske tehnologije, oblikovanja zdravil in načina uporabe farmacevtskih pripravkov.

<b>Cilji in kompetence:</b>	<b>Objectives and competences:</b>
<p><i>Učna enota prispeva k razvoju naslednjih splošnih in specifičnih kompetenc:</i></p> <ul style="list-style-type: none"> <li>• koherentno obvladanje temeljnega znanja, sposobnost povezovanja znanja z različnih področij in aplikacij,</li> <li>• kombinacijo znanja, veščin, etičnih vrednot in obnašanja za preiščeno, ustrezno, varno in strokovno ravnanje pri izvajanju fitoterapevtske metode;</li> <li>• celovito poznavanje spektra različnih metod fitoterapije ter načinov priprave in uporabe pripravkov iz zdravilnih rastlin za zdravljenje, lajšanje in preprečevanje različnih bolezni in zdravstvenih težav;</li> <li>• zmožnost profesionalne komunikacije s strokovnjaki drugih znanstvenih področij in usposobljenost za uspešno delovanje v medpoklicnih timih;</li> <li>• avtonomnost pri strokovnem delu.</li> </ul>	<p><i>The learning unit mainly contributes to the development of the following general and specific competences:</i></p> <ul style="list-style-type: none"> <li>• coherent comprehension of basic knowledge, the ability to integrate knowledge from different fields and applications,</li> <li>• a combination of knowledge, skills, ethical values and behaviour for sound, appropriate, safe and professional conduct in the phytotherapy method implementation;</li> <li>• comprehensive knowledge of the spectrum of various methods of phytotherapy as well as of the preparation and of the use of medicinal herbal preparations for treatment, alleviation and prevention of various diseases and health problems;</li> <li>• the ability to communicate professionally with experts in other scientific fields and to work successfully in interprofessional teams;</li> <li>• autonomy in professional work.</li> </ul>

<b>Predvideni študijski rezultati:</b>	<b>Intended learning outcomes:</b>
<p><b>Študent/študentka:</b></p> <ul style="list-style-type: none"> <li>● pozna zdravilne pripravke, izdelane v različnih prostorih,</li> <li>● pozna literaturo in predpise za izdelavo farmacevtskih pripravkov,</li> <li>● pozna osnovna pravila pisanja receptov, ki so osnova za izdelavo farmacevtskih pripravkov,</li> <li>● loči farmacevtske oblike po osnovnih fizikalno-kemijskih lastnostih,</li> <li>● pozna osnovne značilnosti in delitev farmacevtske embalaže,</li> <li>● pozna pomen in postopke priprave izvlečkov iz drog in razlike med njimi,</li> <li>● pozna nekatere nove farmacevtske oblike.</li> <li>● pozna postopke za izdelavo farmacevtskih pripravkov v različnih okoljih,</li> <li>● razume potrebne zahteve za varno in strokovno pripravo farmacevtskih pripravkov.</li> </ul>	<p><b>Students:</b></p> <ul style="list-style-type: none"> <li>● recognize medicinal compounds prepared in various environments,</li> <li>● know the relevant literature and regulations for manufacturing pharmaceutical compounds,</li> <li>● know the basic rules for writing prescriptions, which are the basis for the manufacture of pharmaceutical compounds,</li> <li>● differentiate pharmaceutical forms based on their physio-chemical properties,</li> <li>● know the basic forms of pharmaceutical packaging and their properties,</li> <li>● know the properties of extracts from drugs, their ways of preparation and differences between them,</li> <li>● know some novel pharmaceutical forms,</li> <li>● know the procedures for making pharmaceutical preparations in different environments,</li> <li>● understand the necessary requirements for the safe and professional preparation of pharmaceutical preparations.</li> </ul>

<b>Metode poučevanja in učenja:</b>	<b>Learning and teaching methods:</b>
<ul style="list-style-type: none"> <li>● predavanja z aktivno udeležbo študentov (razlaga, diskusija, vprašanja, primeri, reševanje problemov),</li> <li>● seminarske / laboratorijske vaje: priprava, predstavitev in uspešen zagovor projektne/raziskovalne naloge, portfolio (reševanje problemov, študije primera, kritično presojanje, diskusija, refleksija izkušenj, vrednotenje, projektno delo, timsko delo).</li> </ul>	<ul style="list-style-type: none"> <li>● lectures with active student participation (explanation, discussion, questions, examples, problem solving),</li> <li>● seminar tutorial: preparation, presentation and a successful defence of a project paper, portfolio (problem-solving, case studies, methods of critical thinking, discussion, a reflection of experience, evaluation, project work, teamwork).</li> </ul>

<b>Načini ocenjevanja:</b>	<b>Delež (v %)</b> <b>Weight (in %)</b>	<b>Assessment:</b>
<p>Načini:</p> <ul style="list-style-type: none"> <li>● izpit</li> <li>● izdelava, predstavitev in zagovor seminarske naloge</li> </ul> <p>Ocenjevalna lestvica: ECTS.</p>	<p>60 %</p> <p>40 %</p>	<p>Types:</p> <ul style="list-style-type: none"> <li>● exam</li> <li>● preparation, presentation and defence of the seminar paper</li> </ul> <p>Grading scheme: ECTS.</p>