

1. COURSE DESCRIPTION – GENERAL INFORMATION			
1.1. Course teacher	Professor Jelena Filipović-Grčić, PhD; Assistant Professor Ivan Pepić, PhD	1.6. Year of study	5th
1.2. Name of the course	<b>Cosmetology</b>	1.7. Credit value (ECTS)	5
1.3. Associate teachers	Associate professor Anita Hafner, PhD Assistant professor Jasmina Lovrić. PhD	1.8. Type of instruction (number of hours L+E+S+e-learning)	30+30+0
1.4. Study programme (undergraduate, graduate, integrated)	Integrated study of Pharmacy	1.9. Expected enrolment in the course	130
1.5. Status of the course	Compulsory	1.10. Level of use of e-learning (1, 2, 3 level), percentage of instruction in the course on line (20% maximum)	2 <sup>nd</sup>
2. COURSE DESCRIPTION			
2.1. Course objectives	<p>The objective of the course is to develop student practical skills, theoretical knowledge and professional attitudes necessary for success in the Pharmacist profession.</p> <p>Dermopharmacy/Cosmetology is an area where a lot of medicines and health products are used, being the pharmacist often asked for advice and local production of this kind of products. It is well recognized that a deep and updated understanding is required in order to better serve patients. With these objectives in mind, the course was created with in order to promote the cross knowledge between chemistry, biology, pharmaceutics and dermopharmacy. It is required to update previous knowledge on skin biology and skin permeation, focusing the relevance of damaged skin, and pointing out the physicochemical characteristic of drugs/cosmeceuticals and drug/cosmetic formulations/products.</p> <p>The acquired knowledge and skills provide the basis for Pharmaceutical care and Vocational training for pharmacists.</p>		
2.2. Enrolment requirements and required entry competences for the course	<p>At the start of this course the student should have acquired the Drug formulation course completed.</p> <p>At the end of this course, before final exam the students should have acquired the Drug formulation exam.</p> <p>Enrolment requirements: Drug formulation course completed</p> <p>Exam: passed examination in Drug formulation</p>		
2.3. Learning outcomes at the level of the study programme to which the course contributes	<ul style="list-style-type: none"> <li>• Select and apply technological processes in the production of (dermo) pharmaceuticals.</li> <li>• Critical skills in the development and implementation of solutions for practical problems in the production of</li> </ul>		

	<p>(dermo)pharmaceuticals and the monitoring of safe and appropriate application of (dermo) pharmaceuticals and cosmetics.</p> <ul style="list-style-type: none"> <li>• Informing and advising patients on the effects and proper application of (dermo) pharmaceuticals as well as monitoring the treatment course and outcomes.</li> <li>• Apply expert knowledge and skills to provide advice on pharmacotherapy.</li> </ul>		
<p>2.4. Expected learning outcomes at the level of the course (4-10 learning outcomes)</p>	<p>The objective of this course is to enable the future pharmacist to provide expert advice about (dermo) pharmaceutical products and cosmetics. To this end the student will be able to:</p> <ol style="list-style-type: none"> <li>1. Categorize and differentiate dermatological care products and evaluate their scientific justification.</li> <li>2. Asses the formulation of (dermo) pharmaceutical products and cosmetics</li> <li>3. Understand and advise on the potential side effects on the skin of cosmetics and topical pharmaceutical products.</li> <li>4. Understand and apply the general principles of the dermatological therapy.</li> </ol>		
<p>2.5. Course content broken down in detail by weekly class schedule (syllabus)</p>	<p>LECTURES:</p> <ul style="list-style-type: none"> <li>• Principles and methods of dermopharmacy/cosmetology.</li> <li>• The structure and function of the skin.</li> <li>• The structure and function of skin adnexa.</li> <li>• The most common disorders of the physiological skin functions (aging, acne, eczema, dermatitis, dry and sensitive skin).</li> <li>• Raw materials for dermatological/cosmetic preparations.</li> <li>• Dyes and fragrances.</li> <li>• Physicochemical methods in dermopharmacy/cosmetology, formulation of dermatological/cosmetic products.</li> <li>• Skin care products.</li> <li>• Hair care products.</li> <li>• Oral care products and decorative cosmetics.</li> <li>• Aerosol formulations and containers for cosmetic products.</li> <li>• Quality assurance and legislation of dermatological/cosmetic preparations.</li> </ul> <p>LABORATORY:</p> <ul style="list-style-type: none"> <li>• Formulation and evaluation of creams.</li> <li>• Formulation and evaluation of lotions.</li> <li>• Formulation and evaluation of gels, shampoos, roll-ons and toothpastes.</li> <li>• Formulation and evaluation of dermatological/cosmetic vehicles and powders.</li> </ul>		
<p>2.6. Type of instruction</p>	<p><b>lectures</b></p>	<p>independent study</p>	<p>2.7. Comments:</p>

2.6. Type of instruction	seminars and workshops exercises online in entirety <b>mixed e-learning</b> field work	multimedia and the internet <b>laboratory</b> work with the mentor (other)			2.7. Comments:	
2.8. Student responsibilities	Regular attendance of lectures and laboratory. Reporting the laboratory results in a form of small research paper or report. Taking the partial and final written exams.					
2.9. 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	1	Research		Practical training	1
	Experimental work		Report			
	Essay		Seminar essay		(Other--describe)	
	Tests		Oral exam		(Other—describe)	
	Written exam	3	Project		(Other—describe)	
2.10. Grading and evaluation of student work over the course of instruction and at a final exam	Continuous assessment (ISVU system) - two written examinations during semester and written final examination; assessment of practical work in laboratory.					
2.11. Required literature (available at the library and via other media)	<b>Title</b>					
	1. M. Čajkovac, Kozmetologija, Slap, Zagreb, 2004.					
	2. J. Filipović-Grčić, Praktikum kozmetologije, FBF, Zagreb, 2001.					
	3. Handbook of Cosmetic Science and Technology, Marc Paye (Editor), Andre O. Barel (Editor), Howard I. Maibach (Editor) 3 <sup>rd</sup> Ed., Informa HealthCare, 2009.					
	PDF version of lecturer's presentations (available to the students enrolled into this course).					
2.12. Optional literature	Takeo Mitsui (ed.), New Cosmetic Science, Elsevier, Amsterdam, 1997.					
2.13. Methods of monitoring quality that ensure acquisition of exit competencies	Assessment of learning outcomes through practical examinations, continuous assessment by written examinations during semester and final written examinations. Analysis of assessment results to improve the quality of teaching.					