1. COURSE DECRIPTION – GENERAL INFORMATION

1.1. Course teacher	Associate Professor Renata Jurišić-Grubešić, PhD Assistant Professor Željka Vanić, PhD Professor Sanda Vladimir-Knežević, PhD	1.6. Year of study	5th
1.2. Name of the course	**Professional Training for Pharmacists**	1.7. Credit value (ECTS)	30
1.3. Associate teachers	Teacher practitioners working in the pharmacy (supervisors-pharmacists)	1.8. Type of instruction (number of hours L+E+S+e-learning)	0+720+0
1.4. Study programme (undergraduate, graduate, integrated)	Integrated study of Pharmacy	1.9. Expected enrolment in the course	150
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. COURSE DESCRIPTION

2.1. Course objectives	Training for independent work within pharmaceutical profession.
2.2. Enrolment requirements and required entry competences for the course	Prerequisites: practical training in Pharmacy Practice 2 completed and passed examination in all obligatory courses.
2.3. Learning outcomes at the level of the study programme to which the course contributes	• Application of knowledge and skills in Pharmacotherapy counseling and pharmaceutical care providing in line with applicable laws and regulations, current health policies and guidelines, and the principles of pharmacy ethics and deontology. • Development and implementation of problem solving skills in manufacturing and monitoring of safe and appropriate drug application by applying receptive, analytical and critical skills. • Ensuring positive interaction with patients, associates, other healthcare professionals and the public through verbal and written communication. • Professional and responsible behaviour with significant contribution in various situations and surroundings such as interprofessional groups, pharmaceutical surroundings and professional organizations and boards. • Pharmaceutical care provision implying patient counselling on mechanisms and correct application of medicines, and monitoring therapy course and outcomes; identifying and preventing clinically significant drug-drug interactions;

;	actively participating in disease prevention and health safeguarding, and public health initiatives. • Efficient application of financial, advertising and organizational principles important for individual and team-work; participating and supervising distribution of drugs; planning and implementation of pharmaceutical care. • Use of information technologies and databases for the purpose of improving knowledge and skills and self-education. • Demonstrating independence in organization, governing and management, preparing professionally relevant strategies and business plans. • Application of legal and ethical professional principles in individual and team work.
2.4. Expected learning outcomes at the level of the course (4-10 learning outcomes)	On completion of the course the student should be able to: 1. Apply user pharmacy programs and procedures of keeping mandatory turnover and business records at community and hospital pharmacy; 2. Dispense prescription medicines and medicines from special drug groups (psychotherapeutic substances and narcotics), as well as medicinal products; 3. Prepare, dispense, distribute and monitor turnover of medicines at hospital pharmacies (prescription medicines, galenic, magistral and extemporaneous formulations); 4. Monitor and report side effects; 5. Describe the group of products "Cosmetics" and "Special Purpose Cosmetics"; 6. Master the ways of providing pharmaceutical care.
2.5. Course content broken down in detail by weekly class schedule (syllabus)	COMMUNITY PHARMACIES: • Introduction with administrative work, user pharmacy programs and procedures of keeping mandatory turnover and business records at community and hospital pharmacy • Introduction to therapeutic drug groups, their indications, side-effects and contraindications, and potential clinically significant interactions • Application of professional/expert literature and clinical decision support tools (e.g. Stockley, Lexicomp etc.) • Getting familiar with correct monitoring and reporting of side effects and medicinal product quality defects (Adverse Reaction Notification Form and Medicinal Product Quality Defect Notification Form) • Describing generic medicines (pharmaceutical equivalents), alternatives and their pharmaceutical forms. • Getting familiar with strong, very strong and intoxicating compounds, evidence of their dispensing and pursuant law regulations (storing, dispensing regimen). • Describing and dispensing veterinary drugs.

	• describing the group of products "Cosmetics" and "Special Purpose Cosmetics" • Understanding all operating procedures related to dispensing of prescription only and non-prescription medicines (e.g. data on the prescription, drug dispensing on private prescription, e-prescription, filing records at pharmacy). • Describing methods of pharmaceutical care delivery (communication with the patient, patient adherence, counselling on therapeutics and self-medication). Hospital pharmacies: • Describing the role and scope of work of a hospital pharmacist, and organization and structure of hospital pharmacy. • Introduction to therapeutic drug groups and medical substances most commonly or exclusively applied in hospitals, their pharmaceutical forms, bandaging and laboratory materials, and storage at hospital pharmacies. • Introduction to production of extemporaneous and galenic preparations for the purpose of hospital inpatient treatment, including aseptic preparation steps and sterilization of medical devices, and preparing infusion solutions. • Introduction to dispensing drugs to the ward, filing records of evidence and laboratory log-book. • Introduction to mandatory literature for hospital pharmacy.				

2.6. Type of instruction	lectures seminars and workshops exercises online in entirety mixed e-learning **field work**	**independent study** multimedia and the internet laboratory work with the mentor (other)	2.7. Comments:

2.8. Student responsibilities	Practical work in the community pharmacy supervised by mentor-pharmacists, positively marked report and completed pre-registration exam.

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		Research		Practical training	15
	Experimental work		Report	3		
	Essay		Seminar essay		(Other--describe)	
	Tests		Oral exam	6	(Other—describe)	
	Written exam	6	Project		(Other—describe)	

2.10. Grading and evaluation of student work over the course of instruction and at a final exam	During professional practice the student shall keep a log diary pursuant to which he/she drafts the REPORT ON THE COMPLETED PROFESSIONAL PRACTICE which is than approved and signed off by the supervisor-pharmacist. On the basis of the completed practical work and the positive mark on the report, the student passes the course. Final pre-registration exam comprises written and oral exam.

2.11. Required literature (available at the library and via other media)	Title		
	European pharmacopoeia , 2008, vol. 6 (or older editions)*		
	Croatian pharmacopoeia, 2007, vol. 1;* new edition available online		
	Drug Registry RH 2014, Association of employers in healthcare, Zagreb, 2014.*		
	I. Francetić, Pharmacotherapy Handbook, 6th Ed., Medical Edition, Zagreb 2010*		
	* required literature is available in teaching community pharmacies - training units		

2.12. Optional literature	Optional literature is available in teaching pharmacies-training units.
2.13. Methods of monitoring quality that ensure acquisition of exit competences	Learning outcomes 1-6 should be assessed during the field work under the supervision of mentor-pharmacists and described in the written report of the student upon the completed practice, and are examined as a part of the final exam.