NAME OF THE COURSE	Basic Farmacology				
Code	PMB742	Year of study	2nd		
Course teacher	Ivana Mudnić, Associate professor Mladen Boban, Professor	Credits (ECTS)	3		
Associate teachers		Type of instruction (number of hours)	L	S	E	F
			15		15	
Status of the course	Elective	Percentage of application of e-learning	0 %		

COURSE DESCRIPTION	
Course objectives	1. To accomplish basic knowledge of the underlying mechanisms of drugs action at the molecular level. 2. Enable students to infer beneficial end harmful effects of the clinically important drugs in common diseases based on knowledge of their mechanism of action at the molecular level. 3. Present specific drug not only as a therapeutic tool, but also as a research tool, to facilitate students' understanding of pre-clinical and clinical research strategies for new drug development.
Course enrolment requirements and entry competences required for the course	Core knowledge of Biochemistry, Cellular and Molecular Biology, Physiology and Microbiology.
Learning outcomes expected at the level of the course (4 to 10 learning outcomes)	1. Describe, explain, and understand the general principles of drugs actions and their molecular targets (pharmacodynamics). 2. List and name clinically important drugs in common diseases that represent individual pharmacotherapeutic class and group them according to the mechanism of action and molecular targets. 3. Describe and explain side effects of the drugs and review significant drug interactions and relate them with the drugs' molecular targets. 4. Explain and describe pre-clinical and clinical strategies for new drugs development and testing, focusing on the role of the molecular biologist. 5. Utilize relevant national and international drug databases.
Course content broken down in detail by weekly class schedule (syllabus)	**LECTURES:** 1. Introduction 2. General principles of drugs actions and molecular targets of drugs 3. New drugs development, pre-clinical and clinical trials, generic drugs and pharmacogenomics 4. Pharmacology of autonomic and central nervous system 5. Pharmacology of cardiovascular system 6. Immunopharmacology and cancer chemotherapy 7. Antimicrobial drugs 8. Pharmacotherapy of diabetes and obesity **EXERCISES:** 1. Laboratory pharmacodynamics 1: drugs effects *in vitro* (rat isolated organs; heart, aortic vascular rings and ileum) 2. Laboratory pharmacodynamics 2: drugs effects *in vivo* (psychopharmaceuticals in mice)

	3. Important drug side effects and interactions: examples from clinical practice - case reports 4. Use of databases with verified information on drugs					
Format of instruction	☒ lectures ☐ seminars and workshops ☒ exercises ☐ *on line* in entirety ☐ partial e-learning ☐ field work			☐ independent assignments ☐ multimedia ☒ laboratory ☐ work with mentor ☐ (other)		
Student responsibilities	In accordance with the *Rules of the study and the study system* and *Deontological code* for students at University of Split.					
Screening student work *(name the proportion of ECTS credits for each activity so that the total number of ECTS credits is equal to the ECTS value of the course)*	Class attendance	1,0	Research		Practical training	0,5
	Experimental work	0,5	Report		(Other)	
	Essay		Seminar essay		(Other)	
	Tests		Oral exam		(Other)	
	Written exam	1,0	Project		(Other)	
Grading and evaluating student work in class and at the final exam	Requirement for taking the final exam is orderly attendance to all teaching activities during the course. The written exam consists of 30 multiple choice questions.					

Required literature (available in the library and via other media)	Title	Number of copies in the library	Availability via other media
	Katzung BG, Masters S, Trevor AJ. Temeljna i klinička farmakologija, 2. hrvatsko izdanje. Zagreb: Medicinska naklada, 2019.		
	Rang HP, ed. Rang & Dale's Pharmacology 9th edition. Edinburgh: Elsevier, 2020.		
	Katzung BG, ed. Basic & Clinical Pharmacology, 14th edition. New York: McGraw-Hill Education, 2018.		

Optional literature (at the time of submission of study programme proposal)	1. Brunton LL, ed. Goodman & Gilman's: The Pharmacological Basis of Therapeutics, 13th edition. New York: McGraw-Hill Education, 2018. 2. Katzung BG, ed. Katzung & Trevor's Pharmacology Examination and Board Review,12th edition. New York: McGraw-Hill Education, 2019.
Quality assurance methods that ensure the acquisition of exit competences	• Quality control analysis by the students and teachers • Analysis exam passing • Report of the Committee for the teaching quality control • Extra-institutional evaluation (teams for quality control of the National Agency for quality control, inclusion to TEEP)
Other (as the proposer wishes to add)	