

<b>Name of the course</b>	<b>Clinical Pharmacology</b>			<b>Code</b>	MSE606
<b>Type of study program:</b>	Integrated university study program, Medicine			<b>Year of study:</b>	6
<b>Credits (ECTS):</b>	2.0	<b>Semester:</b>	XII	<b>Number of hours per semester (l+s+e)</b>	40 (10+15+15)
<b>Status of the course:</b>	obligatory	<b>Preconditions:</b>	According to the Rulebook	<b>Comparative conditions:</b>	/
<b>Access to course:</b>	Sixth year students			<b>Hours of instructions:</b>	According to schedule
<b>Course teacher:</b>	Associate professor Filipa Markotić, MD, PhD				
<b>Consultations:</b>	As agreed with students				
<b>E-mail address and phone number:</b>	<a href="mailto:filipa.markotic@mef.sum.ba">filipa.markotic@mef.sum.ba</a>				
<b>Associate teachers</b>	Ass prof Nataša Pejanović Škobić, MD, PhD Ass. prof. Martin Kondža, mr. pharm. Milena Oreč, MD, MsC				
<b>Consultations:</b>	As agreed with students				
<b>E-mail address and phone number:</b>					
<b>The aims of the course:</b>	The aims of the course are: to acquire basic knowledge about the process of discovering and developing new drugs and the rational use of drugs. The rational use of drugs implies the use of the drug in the accepted indication, at the right time, during the appropriate period, with an acceptable ratio of effectiveness and harm, quality and pharmaco-economic aspects (not only prices).				
<b>Learning outcomes (general and specific competences):</b>	<p><u>General outcomes:</u> Evaluation of personal skill's upgrade, learning abilities and capabilities as well as upgrade and modification of previous knowledge.</p> <p><u>Specific outcomes:</u> Student:</p> <ol style="list-style-type: none"> <li>1. Describes and explains the process of development and research of new drugs.</li> <li>2. Describes and explains the general principles of drug action (pharmacodynamics), the fate of the drug in the body (pharmacokinetics), the basics of biotransformation and list and describe the most important side effects and interactions.</li> <li>3. Explains the basics of pharmaco-economic and pharmaco-epidemiology</li> <li>4. Lists and describes the use of dietary supplements and herbal preparations</li> <li>5. Describes and explains individualized treatment and the use of drugs in special groups</li> <li>6. Describes and explains the basics of evidence-based medicine and describe the guideline writing process</li> <li>7. States and describes the principles of treatment of selected clinical conditions</li> </ol>				
<b>Course content (Syllabus):</b>	Clinical Pharmacology collegium consists of 40 hours divided in 16 sections through lectures, practical work and seminars. Sixteen learning sections are as follows: basic principles of clinical pharmacology, pharmaco-epidemiology, cardiovascular-renal drugs, drugs that act in the central nervous system, endocrine drugs, drugs used in the treatment of gastrointestinal diseases, antimicrobial drugs, supportive care in oncology, drugs used in the treatment of anaphylaxis, drugs used in the treatment of asthma and COPD, biological drugs, the treatment of dyslipidaemias, individualization of drug therapy, basics of toxicology, pain treatment, evidence based medicine.				
<b>Format of instruction (mark in bold)</b>	<b>Lectures</b>	<b>Exercises</b>	<b>Seminars</b>	<b>Independent assignments</b>	
	<b>Consultations</b>	Work with mentor	Field work	Other	
	Remarks: During exercises and seminars, under supervision, students alone or in small groups have the opportunity to practice case solving and practice using health and medicine databases. At the end is a block of lectures from the scheduled part of clinical pharmacology.				
<b>Student responsibilities</b>	Attending and actively taking part in classes.				

<b>Screening student work (mark in bold)</b>	<b>Class attendance</b>	<b>Class participations</b>	Seminar essay	Practical training
	Oral exam	<b>Written exam</b>	Continuous assessment	Essay
<b>Detailed evaluation within a European system of points</b>				
<b>STUDENTS RESPONSIBILITIES</b>	<b>HOURS</b>	<b>PROPORTIONS OF ECTS CREDITS</b>	<b>PROPORTIONS OF GRADE</b>	
Class attendance and engagement	40	1.3	0%	
Written exam	20	0.7	100%	
Total	60	2	100%	
Further clarification: The exam is written.				
<b>Final score:</b> The final assessment is carried out according to the Regulation of Studies of the University of Mostar and applies to all study groups. According to the Regulations on studying final grade is obtained as follows: A = 91-100% 5 B = 79 to 90% 4 C = 67 to 78% 3 D = 55 to 66% 2 F = 0 to 54% 1				
<b>Required literature:</b>	Bertram G. Katzung: Basic and Clinical Pharmacology, 14th edition. 2017.			
<b>Optional literature:</b>	Clinical guidelines Lecture notes			
<b>Additional information about the course</b>				

Annexes: calendar classes

<b>The number of teaching units</b>	<b>TOPICS AND LITERATURE</b>
<b>I.</b>	Title: Basic principles of clinical pharmacology Short description: Drug development and regulation, clinical pharmacokinetics, pharmacodynamics, drug biotransformation. Literature: required and optional
<b>II.</b>	Title: Pharmacoepidemiology Short description: Pharmacoconomics, pharmacoepidemiology, pharmacovigilance Literature: required and optional
<b>III.</b>	Title: Evidence based medicine Short description: Evidence-based medicine and clinical guidelines, medical research, health and medicine databases Literature: required and optional
<b>IV.</b>	Title: Cardiovascular-renal drugs Short description: Agents Used in Cardiac Arrhythmias, treatment of hypertension, treatment of ischemic heart disease, antiplatelet and anticoagulant therapy, treatment of heart failure, Literature: required and optional
<b>V.</b>	Title: Drugs that act in the central nervous system Short description: Anxiolytics and hypnotics, treatment of depressive disorders, treatment of schizophrenia and other psychotic disorders, treatment of common neurologic conditions Literature: required and optional
<b>VI.</b>	Title: Endocrine drugs Short description: Glucocorticoids, hormone replacement therapy, osteoporosis treatment, treatment of diabetes Literature: required and optional
<b>VII.</b>	Title: Drugs used in the treatment of gastrointestinal diseases Short description: Treatment of gastrointestinal diseases such as GERD and gastritis Literature: required and optional
<b>VIII.</b>	Title: Antimicrobial drugs

	Short description: Antimicrobial drugs
	Literature: required and optional
<b>IX.</b>	Title: Supportive care in oncology
	Short description: Supportive care in oncology
	Literature: required and optional
<b>X.</b>	Title: Drugs used in the treatment of anaphylaxis
	Short description: The treatment of anaphylaxis
	Literature: required and optional
<b>XI.</b>	Title: Drugs used in the treatment of asthma and COPD
	Short description: The treatment of asthma, the treatment of COPD
	Literature: required and optional
<b>XII.</b>	Title: Biological drugs
	Short description: Vaccines, biosimilars, orphan drugs
	Literature: required and optional
<b>XIII.</b>	Title: The treatment of dyslipidaemia
	Short description: Hypolipemic drugs and treatment of peripheral arterial disease
	Literature: required and optional
<b>XIV.</b>	Title: Individualization of drug therapy
	Short description: Dietary and herbal supplements, generic and OTC drugs, common paediatric conditions
	Literature: required and optional
<b>XV.</b>	Title: Basics of toxicology
	Short description: Basics of toxicology
	Literature: required and optional
<b>XVI.</b>	Title: Pain treatment
	Short description: Drugs used in the treatment of acute pain, drugs used in the treatment of chronic pain
	Literature: required and optional