

Code: MFSE 1202	Course title: CLINICAL PHARMACOLOGY		
Level: clinical	Study year: VI	Semester: XII	ECTS: 2
Status: obligatory	Total contact hours: 30		
Prerequisites: According to the study regulation			
Lecturers: Professors and associates involved in the implementation of the course in accordance with the plan of the teaching process			
1. Overall aim	The overall aim of the Clinical Pharmacology Course is to increase understanding of Rational Pharmacology in Common Human Diseases.		
2. Course contents	<p>The following topics will be covered within the Modules:</p> <p>Module 1. Rational treatment of heart and respiratory disease The aim of this Module is to introduce student to with current guidelines for the treatment of selected indications – cardiovascular and respiratory diseases (CVD and RDs), proper drug dosing, therapeutic monitoring and correction of therapy for polypharmacy cases, common adverse effects and interaction of applied drugs.</p> <p>Module 2. Rational treatment of neurological and psychiatric disorders The aim of this Module is to introduce student to current guidelines for the treatment of selected indications - neurological and psychiatric disorders including proper drug dosing, with focus on treatment of depression, anxiety, stroke, polyneuropathies, adverse effects, and drug interactions.</p> <p>Module 3. Rational treatment of autoimmune, metabolic, hematological and endocrine disorders The aim of this Module is to introduce student to current guidelines for the treatment of selected indications - autoimmune diseases, immunosuppression, metabolic and endocrine disorders, haematological disorders including proper drug dosing and therapeutic monitoring in rheumatoid arthritis, diabetes mellitus, thyroid dysfunctions, immunosuppressive use and their adverse effects, anemia, and interactions of applied drugs.</p> <p>Module 4. Rational treatment of infective diseases The aim of this Module is to introduce student to current guidelines for the treatment of diseases caused by microorganisms, the dosage of drugs in selected indications and therapeutic monitoring of respiratory infection, urinary, fungal and intestinal infections. Use of medicines in the treatment of diseases caused by microorganisms with special attention to special populations of patients (children, pregnant women, patients with impaired renal and hepatic function, individual variations), and interactions and adverse effects of the administered drugs.</p>		
3. Learning outcomes	<p>Students will improve knowledge of rational administration of drugs in clinical conditions that are common in an outpatient setting in a general practitioner's office. The students will gain knowledge about current therapeutic recommendations and guidelines for common conditions. Through practical work the students will master rational selection and prescription of drugs.</p> <p><i>Through the lectures and seminars the students will gain following knowledge and competences:</i></p> <p>1. Learn the current guidelines for treatment of selected CVS indications and</p>		

	<p>diseases of the respiratory system (COD).</p> <p>2. Learn the current guidelines for treatment of selected neuropsychiatric indications: depression, anxiety, CVI/TIA, polyneuropathy and radiculopathy, adverse effects, and interactions.</p> <p>3. Learn the current guidelines for treatment of: autoimmune diseases, immunosuppression, metabolic and endocrine disorders, hematological disorders, including drug dosage and therapy monitoring in rheumatoid arthritis, diabetes, disorders of the thyroid gland, administration of immunosuppressants and their adverse effects, anemia, and interactions of administered drugs.</p> <p>4. Learn the current guidelines for treatment of respiratory infections, urinary tract infections, fungal infections and intestinal infestations.</p> <p><i>Through the practical laboratory work students will acquire following skills:</i></p> <ul style="list-style-type: none"> -Rational prescription based on evidence -Recognizing the effective and safe use of drugs -Administration of drugs in special populations -Basic therapy monitoring -Interpretation of drug interactions
4. Teaching methods	<p>Lectures: 10 hours</p> <p>Seminars: 20 hours</p>
5. Method of knowledge assessment and examination	<p>- Written tests in the form of-Multiple choice questions (MCQ) tests.</p> <p>Continuous knowledge and skills assessment will be carried out through Partial exams that involves solving problems based on clinical problems and key-feature problems</p> <p>Practical Exam A Practical Exam implies the assessment of the acquired skills through modules 1, 2, 3 and 4. Practical Exam includes a 5-order test with responses based on clinical problems. The minimum number of points is 28 and maximum is 50.</p> <p>Partial Exam Partial exam implies acquired knowledge through modules 1, 2, 3 and 4. Partial exam is a written test and consists of 30 MCQ questions. Each correct answer to the MCQ question is 1 point. The student must score at least 16 points to pass. The maximum number of points is 30.</p> <p>Seminar work - adequate for practical work on exercises on a given topic. Positive seminar work is scored with a maximum of 5 points (scale 2-5). The total number of points a student can win at a seminar is 20.</p> <p>The awarded number of points is added to the other points when forming the final grade.</p> <p>Final exam A student who has not achieved enough score during a continuous assessment or is dissatisfied with the grade obtained by completing the Final Exam. The final exam is a partial exam and a practical part. A Practice Exam is passed before the written part (partial exam) is required. If a student has not passed the Partial Exam, the written part of the final part consists of 30 MCQ questions. Each correct answer to the MCQ question is 1</p>

	<p>point. The student must have at least 16 points to have the exam passed. The maximum number of points a student can win in this part of the exam is 30 points. The number of points earned is added to the other points in the final score.</p> <p>Grading of the parts of the exam will be performed with respect to the following rules and regulations:</p> <ul style="list-style-type: none"> ○ 95-100% correct answers - grade 10 ○ 85-94% correct answers - grade 9 ○ 75-84% correct answers - grade 8 ○ 65-74% correct answers - grade 7 ○ 55-64% correct answers - grade 6 ○ rest of the students – failing grade - grade 5
6. Literature	<p>Recommended:</p> <ol style="list-style-type: none"> 1 James Ritter, Rod Flower, Graeme Henderson, Yoon Kong Loke, David MacEwan, Humphrey Rang: Rang & Dale's Pharmacology 9th Edition 2019 2. Katzung's -Basic and Clinical Pharmacology 15th edition, The McGraw Hill Companies Inc. 2021. 2. Goodman & Gilman's the pharmacological basis of therapeutics', 13th edition, edited by Laurence Brunton, Bjorn Knollman and Randa Hilal-Dandan. TheMcGraw Hill; 2017. 4. Modern Pharmacology with Clinical Applications. Charles R Craig & Robert E Stitzel. Sixth edition, Lippincott Williams & Wilkins; 2004.
7. Notes	<p>Consultations will be possible every day from 12 to 13 h., with advance notice to the secretary of the Department or by e-mail: farmakologija@mf.unsa.ba</p> <p>In case of absences from teaching, the procedure defined by actual legal regulations will be followed.</p>

COURSE PLAN: CLINICAL PHARMACOLOGY

Week 2.	Form of teaching	Number of hours
Monday	Lecture: Introduction to the current treatment guidelines in selected indications – Cardiovascular and Respiratory Systems; polypharmacy, common adverse effects and drug interactions Seminar: Case studies and Problem based learnings.	2 4
Tuesday	Lecture: Introduction to the current treatment guidelines in selected indications - neurological and psychiatric disorders, common adverse effects and drug interactions. Seminar: Case studies and Problem based learnings.	2 4
Wednesday	Lecture: Introduction to the current treatment guidelines in selected indications - autoimmune diseases and immunosuppression, metabolic and endocrine disorders, haematological abnormalities, common adverse effects and drug interactions. Seminar: Case studies and Problem based learnings.	2 4
Thursday	Lecture: Introduction to the current treatment guidelines in selected indications - diseases caused by microorganisms, common adverse effects and drug interactions. Seminar: Case studies and Problem based learnings.	2 4
Friday	Practical exam Partial exam	4 2
1 week after completion of class	Final exam - Regular Examination Term	
2 weeks after regular examination term	Re-sit Examination Term	