

MODUL - RATIONAL THERAPY AND PHARMACOTHERAPY OF MOST COMMON CONDITIONS	
GENERAL INFORMATION	
Course coordinator	Associate Professor Suzana Mimica, MD, PhD
Assistant/Associate	Professor Jure Mirat, MD, PhD Professor Dunja Degmečić, MD, PhD Assoc. Prof. Tatjana Bačun, MD, PhD Assoc. Prof. Ivan Radoš, MD, PhD Asst. Prof. Dubravka Mihaljević, MD, PhD Asst. Prof. Sanda Šarić, MD, PhD Asst. Prof. Anamarija Petek Erić, MD, PhD Ana Haviđić, MD Zvonimir Čagalj, MD
Study Programme	Integrated undergraduate and graduate university study of Medicine
Status of the course	Mandatory
Year of study, semester	6th year, 11th semester
ECTS	4
Workload (hours)	Lectures (10); Seminars (40)
Expected number of students	70
COURSE DESCRIPTION	
Course objectives	
To capacitate students to choose optimal pharmacotherapy of pain syndromes, arterial hypertension, diabetes mellitus, thrombotic diseases, bronchial asthma, chronic heart failure. To capacitate students to choose optimal antibiotics. To capacitate students to solve the problem of polypharmacy and to rationalize and optimize pharmacotherapy. To inform students of implementation of clinical trials results into clinical practice. To capacitate students for optimal drug use in the most common emergency situations. To inform students of clinically significant adverse drug reactions and drug-drug interactions in specific patients' populations.	
Enrolment requirements and entry competencies	
Basic Pharmacology and clinical subjects of the 5th and 6th year of the study.	
Learning outcomes at the Programme level	
1.1., 1.2., 2.1, 3.1., 3.2., 3.4., 4.1., 4.2.	
Learning outcomes (5-10)	
<ol style="list-style-type: none"> 1. To appraise optimal pharmacotherapy options of pain syndromes, arterial hypertension, diabetes mellitus, thrombotic diseases, bronchial asthma, chronic heart failure. 2. To choose optimal antibiotic in empiric use. 3. To interpret the significance of clinical trial results for the prescribing practice. 4. To explain the characteristics of drug use in the special patients' populations. 5. To appraise the risk-to-benefit ratio of drug use. 6. To choose the optimal pharmacotherapy option in most common indications in pregnant and breastfeeding women. 7. To choose the optimal drug in the most common emergency conditions. 	
Course content	

Lectures

Rational drug prescribing. Evidence-based medicine. The problem of polypharmacy in the current practice. Mechanisms of pain sensation and effects of analgesics. Adverse drug reactions and pharmacovigilance. Mechanism of action of antimicrobial drugs. The choice of empiric antibiotics. Pharmacotherapy in the elderly. Pharmacotherapy of acute coronary syndrome and after percutaneous coronary interventions. The role of pharmacotherapy in psychiatric clinical practice. Antipsychotic medications. Methodology of clinical trials of the new medications.

Seminars

Antihypertensive therapy in the current practice. Hypolipemic therapy in the current practice. The therapy of asthma and COPD in the current practice. Acute and chronic pain. Clinical pharmacology of analgesics. Antiplatelet and anticoagulant therapy in the current practice. Therapy of chronic heart failure in the current practice. Therapy of atrial fibrillation in the current practice. Pharmacotherapy of depression in clinical practice. Therapy of anxiety and insomnia in clinical practice. Rational use of drugs in gastroenterology. Clinical pharmacology of drugs used to treat diabetics and obesity. Drug hypersensitivity. Pharmacogenetics and personalized pharmacotherapy. Adverse drug reactions in clinical practice. Nephrotoxicity and hepatotoxicity of drugs. Empiric therapy of respiratory infections with case reports. Empiric therapy of urinary infections with case reports. Drug use in pregnancy and breastfeeding with case reports. Use of drugs in paediatric population with case reports. The drugs of choice in the most common emergency conditions. Rational use of anti-inflammatory and antithrombotic drugs, the risk of bleeding. Herbal drugs. Alternative and complementary medicine.

Mode of teaching

Lectures; Seminars

Student obligations

Students are expected to attend all class sessions, as well as to take all the examinations. However, they are allowed for excused absences, totalling 30% of all classes.

Monitoring student work (alignment of learning outcomes, teaching methods, and grading)

Teaching activity	ECTS	Learning outcome	Student activity	Assessment methods	Grade points	
					Min.	Max.
Seminar	0,4	1-7	Work on seminar and presentation	Presentation	5	20
Written exam	1,8	1-7	Learning for the written exam	Written exam	22,5	45
Oral exam	1,8	1-7	Learning for the oral exam	Oral exam	22,5	45
Total	4				50	100

Evaluation/grading of the final written examination:

Percentage of correct answers (%)	Grade points
100%-95%	45
94,99-90%	42

89,99-85%	40
84,99-80%	36
79,99-75%	32
74,99-70%	28
69,99-65%	25
64,99-60%	22,5

Evaluation/grading of the oral examination

Answer	Grade points
The exceptional answer	35,00-45,00
The very good answer with minor errors	21,00-34,99
The average answer with noticeable errors	10,00-20,99
The answer meets the minimum criteria	<9,99

Calculation of final grade:

Based on the total sum of the points awarded during the course and the final exam, the final grade is determined according to the following distribution:

A – excellent (5): 80-100 grade points; B – very good (4): 70-79,99 grade points; C – good (3): 60-69,99 grade points; D – sufficient (2): 50-59,99 grade points

Required reading (available in the library and through other media)

Title	Number of copies in the library	Availability through other media
1. Katzung B. Temeljna i klinička farmakologija. Medicinska naklada Zagreb, 14. izdanje, 2020.	10	
2. Mihić D, Mirat J, Včev A. Interna medicina. Medicinski fakultet u Osijeku, 1. izdanje 2021.	10	
3. E-materials from the lectures		

Additional reading

1. Francetić I i sur. Farmakoterapijski priručnik, 7. izdanje. Medicinska naklada, 2015.
2. Francetić I, Vitezić D, urednici. Klinička farmakologija, 2. Hrvatsko izdanje, Zagreb, Medicinska naklada, 2014.
3. L. Brunton, B. Knollmann, R. Hilal-Dandan. Goodman and Gilman's The Pharmacological Basis of Therapeutics, McGraw-Hill Education / Medical; 13th edition, 2017.

Course evaluation procedures

Anonymous, quantitative, standardized student survey providing feedback on the course as well as on the work of course coordinators and their assistants/associates is being conducted by the QA Office of the Faculty of medicine Osijek.

Note /Other

E-learning does not count towards course contact hours but is being used in teaching and comprises links to various web pages, as well as video and audio materials available on web pages.