Faculty of Medicine / PHARMACY / PHARMACOEPIDEMIOLOGY AND PHARMACOECONOMICS

Course:	PHARMACOEPIDEMIOLOGY AND PHARMACOECONOMICS			
Course ID	**Course status**	**Semester**	**ECTS credits**	**Lessons** (Lessons+Exercises+Laboratory)
7633	Mandatory	9	8	4+0+3
Programs	PHARMACY			
Prerequisites	Pharmacology II			
Aims	Providing basic knowledge in the field of pharmacoepidemiology and pharmacoeconomics. Training for critical evaluation of information in the field of pharmacoepidemiology and pharmacoeconomics. Introduction with research methods in these areas			
Learning outcomes	1. use basic concepts in the field of pharmaco-epidemiology and pharmaco-economics; 2. understand the basic epidemiological studies used to test the use and side effects of medicines; 3. understand basic pharmaco-economics analysis; 4. know the principles of controlled use of medicines; 5. know systems of reporting adverse effects of medicines.			
Lecturer / Teaching assistant	Prof. dr Boban Mugoša			
Methodology	Interactive lectures, panel discussions, workshops, exercises			
Plan and program of work				
Preparing week	Preparation and registration of the semester			
I week lectures	Task of farmakoepidemiology and pharmacoeconomics.			
I week exercises	Task of farmakoepidemiology and pharmacoeconomics.			
II week lectures	Rational use of medicines			
II week exercises	Rational use of medicines			
III week lectures	Basic principles of pharmacoepidemiology methods of collection, processing and analysis of data related to the use of drugs and medical products. Using pharmacoepidemiological database			
III week exercises	Basic principles of pharmacoepidemiology methods of collection, processing and analysis of data related to the use of drugs and medical products. Using pharmacoepidemiological database			
IV week lectures	Methods of detection of adverse and beneficial effects of drugs, including spontaneous reporting, ad hoc epidemiological studies and usage of databases			
IV week exercises	Methods of detection of adverse and beneficial effects of drugs, including spontaneous reporting, ad hoc epidemiological studies and usage of databases			
V week lectures	Study design. Cross-section studies, observation studies (cohort studies and case-control) and clinical studies			
V week exercises	Study design. Cross-section studies, observation studies (cohort studies and case-control) and clinical studies			
VI week lectures	Study of medication use. Bias.			
VI week exercises	Study of medication use. Bias.			
VII week lectures	Colloquium			
VII week exercises				
VIII week lectures	Reporting adverse effects of drug. The preparation of reports on drug safety			
VIII week exercises	Reporting adverse effects of drug. The preparation of reports on drug safety			
IX week lectures	Health Economics. Calculating the cost of prevention, diagnosis and treatment.			
IX week exercises	Health Economics. Calculating the cost of prevention, diagnosis and treatment			
X week lectures	Health technology and suitability assessment.Health, social and economic aspects and outcomes of medication use.			
X week exercises	Health technology and suitability assessment.Health, social and economic aspects and outcomes of medication use.			
XI week lectures	Using pharmacoeconomic database			
XI week exercises	Using pharmacoeconomic database			

XII week lectures	Basic principles of pharmacoeconomic methods of collecting, processing and analyzing data. CMA, CEA, CBA, CUA studies.
XII week exercises	Basic principles of pharmacoeconomic methods of collecting, processing and analyzing data. CMA, CEA, CBA, CUA studies.
XIII week lectures	Assessment and selection of pharmacoeconomic method for certain treatments
XIII week exercises	Assessment and selection of pharmacoeconomic method for certain treatments
XIV week lectures	Life quality related to health. Exercise - Using basic tool (questionnaire EQL) to measure life quality
XIV week exercises	Life quality related to health. Exercise - Using basic tool (questionnaire EQL) to measure life quality
XV week lectures	Final exam
XV week exercises	
Student workload	Weekly: 4 credits x 40/30 = 5 h 30min Structure: 2 hour lecturing, 1 hour exercise, 2 hours and 30 minutes for individual work During the semester: lecturing and final exam (5h 30 min x 16 = 85 hours) Necessary preparation (before semester enrollment, etc ...) 2h X 5 hours and 30 minutes = 10 hours Total load: 4 x 30 = 120h Additional work 25h Load structure 85h + 10h + 25h = 120 hours

Per week	**Per semester**
8 credits x 40/30=10 hours and 40 minuts 4 sat(a) theoretical classes 3 sat(a) practical classes 0 excercises **3 hour(s) i 40 minuts** of independent work, including consultations	Classes and final exam: **10 hour(s) i 40 minuts x 16 =170 hour(s) i 40 minuts** Necessary preparation before the beginning of the semester (administration, registration, certification): **10 hour(s) i 40 minuts x 2 =21 hour(s) i 20 minuts** Total workload for the subject: **8 x 30=240 hour(s)** Additional work for exam preparation in the preparing exam period, including taking the remedial exam from 0 to 30 hours (remaining time from the first two items to the total load for the item) **48 hour(s) i 0 minuts** Workload structure: **170 hour(s) i 40 minuts (cources), 21 hour(s) i 20 minuts (preparation), 48 hour(s) i 0 minuts (additional work)**
Student obligations	Regular attending at lectures and exercises, presentation of seminar paper, passing colloquiums and final exam
Consultations	Wednesday, 10:00-12:00h
Literature	1. Strom BL, Pharmacoepidemiology, 2nd ed John Wiley Sons, Chic ester, New York, Brisbane, Toronto, Singapore, 1994; 2. Hartzema AG, Porta M, Tilson HH. Pharmacoepidemiology, Cincinnati: Harvey Whitney; 3. Drummond m et al. Methods for the Economic Eva
Examination methods	Presence at lecturing (0-5 points) Practical classes (0-10 points) Seminar (0-10 points) Colloquium (0-25 points) Final exam (0-50 points) StudThe exam is passed with cumulative 51 points
Special remarks	
Comment	Additional information can be received from the subject teacher, head of the study program and Dean for Academic Affairs

Grade:	F	E	D	C	B	A
Number of points	less than 50 points	greater than or equal to 50 points and less than 60 points	greater than or equal to 60 points and less than 70 points	greater than or equal to 70 points and less than 80 points	greater than or equal to 80 points and less than 90 points	greater than or equal to 90 points