

GENERAL INFORMATION		
Course	Pharmacoeconomics	
Course coordinator	Professor Martina Smolić, MD, PhD	
Assistant/Associate	Assoc. Prof. Ines Bilić-Ćurčić, MD, PhD	
Study Programme	Integrated undergraduate and graduate university study of Medicine in German language	
Status of the course	Elective	
Year of study, semester	6th year, 11th semester	
Grading scale and workload	ECTS	2
	Hours (L+S+E)	15 (10+5+0)
COURSE DESCRIPTION		
Course objectives		
<p>The students will acquire basic knowledge regarding pharmacoeconomic analysis, the use of pharmacoeconomic evaluations in the positioning of drugs in pharmacotherapy, cost planning, and drug development, as well as the impact of the cost of pharmacotherapy on the healthcare system and other aspects of society. The students will obtain knowledge to assess the economic, humanistic, and clinical outcomes of pharmacotherapeutic treatment and evaluate them using pharmacoeconomic methods to improve informed decision-making in the rational use of drugs as much as possible. The students will also learn to apply pharmacoeconomic methods in the individual treatment of patients, as well as in the development of drug policy and the distribution of resources in the modern healthcare system. The students will be acquainted with the application of pharmacoeconomic analysis for budgeting purposes, but also at the level of strategic planning of resource use, in the development of new drugs, in the positioning of drugs within the guidelines for the treatment of certain diseases, and in the procurement of drugs in resource-limited states.</p>		
Enrolment requirements and entry competencies		
There are no special requirements for this course except those defined by the curriculum of the entire study program.		
Learning outcomes at the Programme level		
1.2., 2.1., 3.3., 4.2.		
Learning outcomes (5-10)		

1. Define the term pharmacoeconomics and pharmacoeconomic research.
2. State the basic perspectives of pharmacoeconomic analysis and the differences between them.
3. Distinguish between different categories of medical costs that can be determined, measured, and compared using the pharmacoeconomic analysis.
4. Categorize the effects of healthcare on three basic areas in medical decision-making.
5. Describe the factors of "complete" economic evaluation.
6. Compare different methods of economic evaluations that are commonly applied in the modern healthcare system.
7. Provide arguments for cost-benefit analysis and how it can be used to quantify the value of pharmacotherapy.
8. Discuss the cost-effectiveness analysis and discuss the appropriate application of this method for the evaluation of pharmacotherapy.
9. Discuss the situation with a favorable ratio of cost effectiveness and profitability.

Course content

1. The concept of pharmacoeconomic analyses.
2. Data sources for pharmacoeconomic research.
3. Basic structure of the pharmacoeconomic study, determination of costs, determination of possible and actual consequences, assessment of available data.
4. Basic pharmacoeconomic models: cost and effect analysis.
5. Basic pharmacoeconomic models: cost minimization analysis.
6. Basic pharmacoeconomic models: cost and profit analysis.
7. Basic pharmacoeconomic models: cost and benefit analysis.
8. Pharmacoeconomic analysis: cost per treated patient.
9. Pharmacoeconomic analysis: cost per achieved clinical outcome.
10. Pharmacoeconomic analysis: cost per year of life gained due to the use of the drug.
11. Pharmacoeconomic analysis: cost of better quality of life, cost of disease prevention.
10. Application of pharmacoeconomics at the level of strategic planning of resource use.
13. Application of pharmacoeconomics in the development of new drugs.
14. Application of pharmacoeconomics in the positioning of drugs within the guidelines for the treatment of certain diseases.
15. Application of pharmacoeconomics in procurement of drugs in states of limited

Mode of teaching	<input checked="" type="checkbox"/> lectures	<input type="checkbox"/> independent tasks
	<input checked="" type="checkbox"/> seminars and workshops	<input type="checkbox"/> multimedia and network
	<input type="checkbox"/> exercises	<input type="checkbox"/> laboratory
	<input type="checkbox"/> distance education	<input type="checkbox"/> mentoring work
	<input type="checkbox"/> field teaching	<input type="checkbox"/> other

Student obligations

Students are expected to attend all class sessions, as well as to prepare and actively participate in class. However, they are allowed for excused absences, totalling 30% of all classes.

Monitoring student workAssessment criteria

Attending	x	Class activity	x	Seminar work		Experimental work	x
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classes						
Written exam	x	Oral exam		Essay		Research
Project		Continuous knowledge verification		Paper		Practical work
Portfolio						x
Grading and evaluation of student work during classes and of the final examination						
<p>Students' work is evaluated during classes and on the final exam. During the class, the student will be able to collect a maximum of 100 evaluation points. Students can earn a maximum of 20 points during classes through different forms of activities. At the final exam, students can obtain a maximum of 80 points.</p> <p>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): 90-100 grade points; B – very good (4): 80-89,99 grade points; C – good (3): 70-79,99 grade points; D – sufficient (2): 60-69,99 grade points.</p>						
Required reading (at the time of application of the study program proposal)						
Pharmakologie und Toxikologie. Freissmuth M, Offermanns S, Böhm S; 2 edition: 2016.						
Additional reading (at the time of application of the study program proposal)						
Number of copies of required literature in relation to the number of students currently attending classes in the course						
Title		Number of copies		Number of students		
Pharmakologie und Toxikologie. Freissmuth M, Offermanns S, Böhm S; 2 edition: 2016.		<p>The purchased license for online textbooks will be used.</p> <p>https://bfdproxy48.bfd-online.de/login.htm?back=http%3a%2f%2fpartner.bfd-online.info.bfdproxy48.bfd-online.de%2fameos%2fbfdAboGateway%3fabold%3d264117</p>		All students enrolled in the study program will have access.		
Course evaluation procedures that ensure the acquisition of output knowledge, skills and competences						
<p>An anonymous, quantitative, standardized student survey on the quality of the organization and maintenance of classes, course content and teacher work conducted by the Quality Office of the Faculty of Medicine Osijek and a unique university survey conducted by the Quality Center of the University of J.J. Strossmayer in Osijek. The usefulness of the lectures from the students' perspective, the teaching content, the teacher's preparation, the clarity of the presentation, the amount of new content and the quality of the presentation are evaluated. Administratively, the curriculum and its execution are compared. Student participation in lectures and exercises and the reasons for absences are controlled and analysed.</p>						