

COURSE DESCRIPTION CARD

Faculty of Civil Engineering and Environmental Sciences									
Field of study								Degree level and programme type	
Specialization / diploma path								Study profile	Academic profile
Course name	Forest mushrooms in medicine							Course code	IS-FF-00043S
								Course type	Erasmus
Forms and number of hours of tuition	L	C	LC	P	SW	FW	S	Semester	Summer
	15		15					No. of ECTS credits	3
Entry requirements	Chemistry, Mycology								
Course objectives	The course covers practical issues related to the use of forest mushrooms - large-fruited and microscopic in medicine, including familiarization with the toxic and therapeutic effects of secondary fungal metabolites as well as issues related to the biotechnological use of forest mushrooms, in particular in the production of antibiotics and food for special medical purposes.								
Course content	<p>Lectures: Toxicological significance of large-fruited and microscopic fungi species. Toxic metabolites of fungi. Toxicity groups of mushrooms. Basics of treatment with mushroom poisoning. Characteristics and methods of identification of poisonous mushrooms. Review of the most important species of medical mushrooms. Mushroom growing for medical purposes. Secondary fungal metabolites with therapeutic effect. Medicinal preparations and dietary supplements derived from mushrooms.</p> <p>The use of mushrooms for the production of antibiotics and food for special medical purposes.</p> <p>Laboratory exercises: Identification of selected toxin-producing mushrooms and food-approved species; review of human fungal pathogens and methods for identifying selected groups of parasitic fungi; demonstrations of molecular methods used to identify fungi</p>								
Teaching methods	Information and problem lecture with multimedia presentation, laboratory classes - performing tasks and chemical analyzes individually and in a group.								
Assessment method	Lecture - written test; laboratory exercises - exercise reports and presentation.								
Symbol of learning outcome	Learning outcomes							Reference to the learning outcomes for the field of study	
LO1	Student knows innovative technologies related to obtaining therapeutic substances from mushrooms.							L2P_W04	
LO2	Student is able to indicate threats related to the toxic effects of fungi, is able to identify forest medical mushrooms and use them.							L2P_U05	
LO3	Student is able to obtain, interpret scientific data from various sources and prepare scientific studies and presentations on their basis.							L2P_U11, L2P_U01	

L04	Student can interact in a group and define priorities and work plans.	L2P_U13	
Symbol of learning outcome	Methods of assessing the learning outcomes	Type of tuition during which the outcome is assessed	
L01	Written test	L	
L02	Evaluation of reports and presentations.	LC	
L03	Evaluation of reports and presentations.	LC	
L04	Evaluation of reports and presentations.	LC	
Student workload (in hours)		No. of hours	
Calculation	participation in lectures	15	
	participation in the laboratory	15	
	consultations	5	
	preparation for the laboratory and reports	20	
	preparation of presentations	5	
	preparation for the written test	15	
	Total:	75	
Quantitative indicators		Hours	No. of ECTS credits
Student workload – activities that require direct teacher participation		35	1,4
Student workload – practical activities		40	1,6
Basic references	<p>Medicinal mushrooms : recent progress in research and development. Singapore : Springer Nature, 2019. ISBN : 978-981-13-6381-8</p> <p>Medicinal mushrooms [Elektronski vir] / Jure Pohleven, Tamara Korošec, Andrej Gregori ; [photography by Andrej Gregori ... [et al.] ; translated by Jure Pohleven]. - El. knjiga. - Podkoren : MycoMedica, 2016, ISBN 978-961-93889-1-4 (pdf)</p> <p>Smith, J., Rowan, N. and Sullivan, R. 2002. <i>Medicinal Mushrooms: Their therapeutic properties and current medical usage with special emphasis on cancer treatments</i>. University of Strathelyde, Glasgow,</p>		
Supplementary references	Scientific articles on the therapeutic importance of mushrooms and the practical use of medical mushrooms (selection).		
Organisational unit conducting the course	Faculty of Civil Engineering and Environmental Sciences	Date of issuing the programme	
Author of the programme	Ewa Zapora, PhD	07.04.2020	

L – lecture, C – classes, LC – laboratory classes, P – project, SW – specialization workshop, FW - field work, S – seminar