
		UNIVERSITY OF EAST SARAJEVO					
		Faculty of Medicine					
		Study program: medicine					
		Integrated academic studies		II study year			
Full subject title		PHYSIOLOGY OF AGING					
Department		Department for preclinical subjects, Faculty of Medicine in Foca					
Subject code		Subject status		Semester		ECTC	
ME-02-2-023-3		elective		III		1	
Professor/ -s		full prof. Zvezdana Kojic, PhD; full prof. Sinisa Ristic, PhD; assoc. prof. Nenad Ponorac, PhD					
Associate/ -s							
Number of lectures/ teaching workload (per week)			Individual student workload (in hours per semester)			Coefficient of student workload S ₀ ¹	
L	E	SP	L	E	SP	C ₀	
1	0	0	1*15*1	0*15*1	0*15*0	1	
total teaching workload (in hours, per semester) 1*15 + 0*15 + 0*15 = 15			total student workload (in hours, per semester) 1*15*1 + 0*15*1 + 0*15*0 = 15				
Total subject workload (teaching + student): 15+ 15 = 30 hours per semester							
Learning outcomes		By mastering this subject, students will be prepared to understand the physiological processes related to older age and their impact on the organism.					
General competences		They are prepared for further development and advances within the field of medicine. They are capable of acting in accordance with rational and scientific concepts and principles. They have an unbiased attitude towards new scientific methods in medicine.					
Preconditions		Precondition for taking the exam: all year I exams passed					
Teaching methods		Theoretical lectures, theoretical seminars,					
Subject content per week		Lectures					
		1. Changes in Metabolism and Body Composition: Sarcopenia, Obesity, Thyroid Function, Appetite Regulation, Glycoregulation, and Thermoregulation					
		2. Changes in the Skin: Reduction of Collagen and Elastin, Sun Damage, Loss of Subcutaneous Fat, Changes in Bones and Joints, Osteopenia, and Slower Remodeling					
		3. Changes in Heart Regulation and Blood Pressure					
		4. Changes in Specific Vascular Beds: Coronary, Muscular, Cerebral, Renal, Gastrointestinal Tract (GIT)					
		5. Changes in Microcirculation, Inflammation, Hemostasis, and Hematopoiesis					
		6. Changes in the Digestive, Respiratory Systems, and Kidneys					
		7. Changes in the Immune System					
		8. Changes in the Nervous System: Sensory and Motor Functions					
		9. Changes in Cognitive Functions					
		10. Changes in Reproductive Functions and Sexuality					
		11. Mechanisms of Aging, Factors of Longevity					
		12. Biopsychosocial Model of Aging: Aging as a Weakness of Adaptation and Homeostasis					
		13. Slowing Down Aging					
		14. Monitoring Aging					
15. Seminar							
Compulsory literature							
Author/s		Publication title, Publisher			Year	Pages (from-to)	
Wasserman, MR, Bakerjian D, Linnebur S, Brangman S, Cesari M, Rosen S. (eds) Taffet, GE		Physiology of Aging. In: Wasserman, MR, Bakerjian D, Linnebur S, Brangman S, Cesari M, Rosen S. (eds) Geriatric medicine, Springer, Charm					
Rutledge J, Oh H, Wyss-Coray T.		Measuring biological age using omics data. Nat Rev Genet 23,715-727			2022.		
Amarya S, Singh K, Sabharwal		Ageing process and Physiological Changes. InTech			2018.		

¹Coefficient of student workload S₀ is calculated as it follows:

a) for the study programs not going through the licensing process: S₀ = (total workload in semester for all the subjects 900 hrs – total teaching workload L+E in semester for all the subjects 870 hrs)/ total teaching workload L+E in semester for all the subjects ____ hrs = _____. Consult form content and its explanation.

b) for the study programs going through the licensing process, it is necessary to use form content and its explanation.

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Additional literature			
Author/s	Publication title, Publisher	Year	Pages (from-to)
Student responsibilities, types of student assessment and grading	Grading policy	Points	Percentage
	Pre-exam activities		
	lecture/exercise attendance	5	5%
	case study – group work	5	5%
	test	40	40%
	Final exam		
	test	10	10%
	written exam	40	40%
	Total	100	100 %
Certification date	June 17th 2024		