

COURSE DESCRIPTION

Academic year: 2022/2023	
University: Comenius University Bratislava	
Faculty: Faculty of Pharmacy	
Course ID: FaF.KFT/01-Mgr/00	Course title: Anatomy and Physiology
Educational activities: Type of activities: lecture / laboratory practicals Number of hours: per week: 2 / 3 per level/semester: 28 / 42 Form of the course: on-site learning	
Number of credits: 6	
Recommended semester: 2.	
Educational level: I.II.	
Prerequisites:	
Recommended prerequisites: None	
Course requirements: Personal attendance at all lectures and practical classes, justified absence (max 2x) is replaced according to the instructions of the teacher; to pass 3 scheduled pre-tests, each minimally 60% rate. The final exam test is completed by students in computer by written form (distant) of examination. To pass the final exam test by students in minimally 60% rate. Evaluation (mark and score): A 91-100%, B 81-90%, C 71-80%, D 66-70%, E 60-65%, FX < 60%. Scale of assessment (preliminary/final): 0/100	
Learning outcomes: By completing the course, the student will gain a comprehensive idea of the organization and activities of the human body. He will learn essential knowledge of the anatomy of the human body, its spatial organization, composition and structure of individual systems and organs, they will get acquainted with the structure of tissues and their components. The student will be able to characterize the basic anatomical and functional units, learn the functions of tissues, organs, individual systems. The focus of teaching is neurohumoral regulation and signaling at the level of the cell and subcellular structures, regulatory, coordination and integration relationships between individual functional systems and the function of the organism as a whole. A necessary condition of the study is the verification of theoretical knowledge gained in lectures at practical exercises. The course is essential for the study of pharmacy and biologically-medically oriented subjects.	
Class syllabus: Introduction to Anatomy and Physiology. Body systems. Structural characteristics of the organs and tissue. Epithelial, connective tissues. Bones, skeleton. Muscular system. Types of muscle tissue. Excitation-Contraction Coupling (ECC). Mechanism of contraction. Nervous system - organization, structure, function. Physiology of Nerve. Central nervous system. Peripheral nervous system- / somatic, autonomic. Somatic, visceral reflex arc. Special Senses. Physiology of vision, hearing, equilibrium and orientation. Endocrine System. Organization and feedback system. Hormones. Glands and their hormones. Organization of	

cardiovascular system. Structure, function and factors affecting heart, vessels, circulation. ECG. Autonomic regulation of vascular lumen diameter. Blood pressure. Blood composition, plasma, elements and their role in the body. Blood clotting. Lymphatic system. Respiratory System. Respiratory Tract, Mechanics of Breathing, Gas Transport, Neurochemical Control of Breathing. Digestive System. Anatomy and Function of the Organs. Basic functional units. Enterohepatic circulation. Secretory function of stomach, liver, pancreas, intestine. Physiology of digestion. Nutrition. Regulation of Body Temperature. Urinary System. Anatomy and Functions of the Kidneys, Accessory Excretory Structures, Urine. Countercurrent multiplier. Mechanism of micturition. Acid-Base Balance. Body Fluids. Anatomy and Physiology of Reproductive System. Male and Female Reproductive Organs, hormones, menstrual cycle, pregnancy

Exercise topics are focused on the anatomical structure of the body, musculoskeletal system, tissue histology and practical tasks determining selected physiological functions of individual systems: nerve cell physiology, reflexes, muscle physiology, blood examination, ECG recording, blood pressure measurement, urine examination, blood examination, determination blood glucose, cholesterol, functional lung examination, determination of body weight and composition, food composition, sensory examination.

Recommended literature:

Vander`s Human Physiology 12th Ed, McGraw/Hill, Ed., NY, by EP Widmaier, H Raff, KT Strang, 2011, ISBN 978/0/07/122215/0

Introduction to Human Anatomy and Physiology, 2nd edition, Saunders Elsevier, St. Louis, by EP Solomon, 2009, ISBN 072160045X/9780721600451

Human Anatomy and Physiology, Pearson Benjamin Cummings, San Francisco, by EN Marieb, K Hoehn, 2007, ISBN 032137294-8

Human Physiology, 3rd edition, Oxford University Press, by G Pocock, 2006, ISBN 0198568789

Basics of Medical Physiology, Comenius University in Bratislava, by D Ostatníková, 2017, ISBN 978-80-223-4196-7

Essentials of Human Physiology for Pharmacy, CEC Press, 2008, by LK McCorry (e-version)

Languages necessary to complete the course:

Slovak

Notes:

Past grade distribution

Total number of evaluated students: 3225

A	ABS	B	C	D	E	FX
24,43	0,0	21,64	25,46	12,99	10,91	4,56

Lecturers: doc. MUDr. Tatiana Stankovičová, CSc., Mgr. Ondrej Sprušanský, PhD., PharmDr. Tatiana Foltánová, PhD., PharmDr. Stanislava Kosírová, PhD., PharmDr. Eva Kráľová, PhD., PharmDr. Tomáš Rajtík, PhD., Mgr. Lenka Bies Piváčková, PhD., PharmDr. Dominika Dingová, PhD., PharmDr. Katarína Hadová, PhD., PharmDr. Csaba Horváth, PhD., doc. PharmDr. Anna Paul Hrabovská, PhD.

Last change: 13.12.2021

Approved by: doc. MUDr. Tatiana Stankovičová, CSc.