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|  **UNIVERSITY OF NIŠ** |
| **Course Unit Descriptor** | **Faculty**  | Faculty of Medicine |
| **GENERAL INFORMATION** |
| Study program  | **INTEGRATED ACADEMIC STUDIES OF MEDICINE** |
| Study Module (if applicable) |  |
| Course title | PHYSIOLOGY |
| Level of study | [x] Bachelor [ ]  Master’s [ ]  Doctoral |
| Type of course | [x]  Obligatory [ ]  Elective |
| Semester  |  [x]  Autumn [x] Spring |
| Year of study  | II |
| Number of ECTS allocated | 20 |
| Name of lecturer/lecturers | Mirjana Radenković, Full ProfessorSlavimir Veljković, Full ProfessorSuzana Branković, Associate ProfessorDragana Veličković, Associate ProfessorMilkica Nešić, Full ProfessorMilan Ćirić, Assistant ProfessorNenad Stojiljković, Assistant ProfessorVoja Pavlović, Assistant ProfessorPavle Ranđelović, Teaching Assistant Marija Gočmanac Ignjatović, Teaching Assistant Sonja Ilić, Teaching Assistant Milica Veljković, Teaching Assistant  |
| Teaching mode |  [x] Lectures [ ] Group tutorials [ ]  Individual tutorials [x] Laboratory work [ ]  Project work [ ]  Seminar [ ] Distance learning [ ]  Blended learning [ ]  Other |
| **PURPOSE AND OVERVIEW (max. 5 sentences)** |
| The course in physiology provides students with the knowledge about: physiological processes within cells, tissues, organs, organ systems, interaction of multiple physiological systems, control mechanisms necessary for homeostasis of human body, adaptation of human organism to various changes in the inner and outer environment. The knowledge obtained during the course in Physiology enables a student and medical doctor: to obtain the necessary understanding of the physiological functions of the complete human body and the observation of integrative physiological processes, to recognize the functions of several various systems, to use the obtained knowledge as a starting point in the understanding of the development of pathological conditions as well as their elimination, to understand the physiological processes, prepares the student to follow the clinical disciplines adequately: to be able to presume the disease of the organ system based on case history and laboratory data and know how it affects the functioning of other organ system. The knowledge of the course contents is a key starting point in the understanding of normal function of human body, mechanisms of pathological processes, and ways to alleviate or suppress them.  |
| **SYLLABUS (brief outline and summary of topics, max. 10 sentences)** |
| Introduction to physiology.Physiology of the excitable tissues - Resting membrane potential, Action potential, Action potential transmission, Physiology of skeletal muscle, Physiology of smooth musclesPhysiology of the cardiovascular system - Morphofunctional characteristics of the heart. Bioelectrical activity of the heart. Rhythmical excitation of the heart. Heart regulation.Physiology of blood circulation - Physical properties of circulation. Blood pressure. Pulse. Local control of blood flow. Microcirculation. Regulation of circulation. Kidneys and body fluid - Body fluid compartments. Glomerular filtration. Creation of final urine.Physiology of respiration - Mechanics of lung ventilation, Respiratory membrane, Transport of gases, Regulation of breathingBiophysics - Flow velocity. Current in a volume conductor.Physiology of the blood - General properties of the blood. Erythrocytes. Leukocytes Physiological basis of hemostasis and coagulation. System of blood groups. Immune system physiology.Physiology of the digestive tract - Transport and mixing of food in the digestive tract. Secretions in the digestive tract. Digestion. Absorption.Regulation of matter and energy exchangePhysiology of the endocrine system - Hormones. Endocrine role of hypothalamus. Hypophysis. Thyroid gland. Parathyroid gland. Endocrine pancreas. Hormones of the adrenal cortex and medulla. Sex hormonesNervous system - Spinal cord, Medulla oblongata and pons, Midbrain, Small brain, Interbrain, Hypothalamus. Vegetative nervous system, Limbic system and behavior, Basal ganglia. Brain cortex. Senses, Senses of hearing and balance, Sense of vision, Senses of smell and taste. Perception of pain.Physiology of sports |
| **LANGUAGE OF INSTRUCTION** |
| [x] Serbian (complete course) [x]  English (complete course) [ ]  Other \_\_\_\_\_\_\_\_\_\_\_\_\_ (complete course)[x] Serbian with English mentoring [ ] Serbian with other mentoring \_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| **ASSESSMENT METHODS AND CRITERIA** |
| **Pre exam duties** | **Points** | **Final exam** | **points** |
| **Activity during lectures** | **2** | **Written examination** | **32** |
| **Practical teaching** | **6** | **Oral examination** | **50****practical exam 6** |
| **Teaching colloquia** | **4** | **OVERALL SUM** | **100** |
| **\*Final examination mark is formed in accordance with the Institutional documents** |