

Subject	BASIS OF KINESIOLOGY
Stady subject	Three years professional studies for graduated physiotherapist
Code:	SF-111
Year of study	First
Semester	First
Total classes	60
Credits	4,5
Type of subject	Obligatory
Preconditions	no
Executed by	Chair (Catheda) for Physical Medicine and Rehabilitation
Responsible teacher	Prof. Erieta Nikolikj-Dimitrova, M.D.,Ph.D.
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Key words	Stady for physiotherapist, professional subjects, kinesiology
Goals of study	- To acquire basic knowledge about the composition and structure of the musculoskeletal system, joints and types of movements; - To acquire a knowledge of muscle tone, contraction, fatigue and mechanism of its occurrence; - To learn the muscle separation according to the role in the coordination and role of the central nervous system in muscle activity; - To get acquainted with reflex contraction and contraction under control ; - To gain a knowledge for the impact of the muscle work on a cardiovascular system, respiratory and gastrointestinal system.
Class descriptions (brief content)	Theoretical instruction (30 lessons): ◁ Orthogonal and coordination system and planes of movements. ◁ Bones, joints, characteristics of the ranges in joint , ranges of motions, joint position. ◁ Structure and innervation of the skeletal muscles. The energy supply of muscles. The role of the CNS in muscles activity. ◁ Muscles contraction . Elasticity. Muscles tone. Muscles fatigue. ◁ Types of muscles contraction. Free and fixed muscles. attachments. Antigravity muscles. Muscle strength and efficiency of contraction. Bone lever, angle of muscle action. ◁ Center of gravity of body segments. Balance . Analysis of the views and positions of the body. ◁ Muscle division by role in the coordinated activity (agonists, antagonists, synergists) fixators. ◁ Polyarticular muscles. Kinetic chains. Open and closed kinetic chains. Coordination of movements.

	◀ Influence of muscles activity on cardiovascular system, respiratory system, and gastrointestinal system. Practical instruction (30 lessons): Training of the physiotherapist for a practical application on the basic knowledge of kinesiology. Training of the physiotherapist for differentiating muscles contraction. Training on physiotherapist for assessment of muscles tone.																					
Organization	Theoretical instruction: 30 lessons Practical instruction: 30 lessons																					
Methods of learning	Lectures, practical lessons, training																					
Provided results of study	Knowledge and understanding: Student will acquire knowledge about the structure and function of the musculoskeletal system; muscle tone, contraction and fatigue. Student will be learned according to the division of muscles role in the coordination and the role of the central nervous system in muscles activity, will be acquainted with reflex contraction and movements under control ,and will acquire the knowledge for the impact of the muscle work to cardiovascular system, respiratory system and gastrointestinal system. Basic skills: student will be able to apply knowledge of the fundamentals of kinesiology for further preparation a plan for kinesiotherapy																					
Specific recommendations for instruction	The student is obligated to take part in all provided activities, including participation in continuous knowledge examinations in order to get a signature. Ranking the student's activities <table><tr><th>Type the Activity</th><th colspan="2">Points</th></tr><tr><th></th><th>Low</th><th>High</th></tr><tr><td>Theoretical instruction</td><td>7,5</td><td>13</td></tr><tr><td>Practical instruction</td><td>7.5</td><td>15</td></tr><tr><td>Continuous examination-1</td><td>25</td><td>42</td></tr><tr><td>Final Exam</td><td>20</td><td>30</td></tr><tr><td>Total:</td><td>60</td><td>100</td></tr></table> * The presence of theoretical instruction: 51% - 60% - 7.5 points, 61% - 70% - 8.5 points, 71% - 80% - 9.5 points, 81% - 90% - 12 points, 91% -100% - 13 points .	Type the Activity	Points			Low	High	Theoretical instruction	7,5	13	Practical instruction	7.5	15	Continuous examination-1	25	42	Final Exam	20	30	Total:	60	100
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	** practical instruction: every practical lesson brings 0.5 points (30 exercise) the presence - 0.25 points activity on practical lesson - 0.25 points Continuous examination (colloquium): Student is necessary to regularly visit theoretical and practical lessons then approaches to continuously checking. Check is written (multiple choice test). The student is obligated to access the colloquium, otherwise, he does not acquire the right for signature at the end of the semester. The student is obliged to win a minimum (60%) of continuous checking, otherwise, he is accessing the complete final exam. Final exam: Students who passed colloquium, go to the final exam. It is performed in the exam sessions (January / February, June / July and / or August / September) and it consists of multiple-choice test. Complete final exam : The student has taken the whole final exam if not von minimum score (60%) from colloquium. The final exam represents a combination of colloquium that was not passed, and final exam. Student is obliged firstly to pass the colloquium, and then accessed to take the final exam. If the student does not pass the unpassed colloquium, he does not have the right for grade to be formed. Forming the complete grade: Assessment for the whole exam is gets according to the table grades, based on the sum of points from all activities, including the continuous checking (examination) and final exam. Passing the colloquium as a condition for the final exam is valid for six consecutive sessions (regardless of whether the student is called exam) after that the student re-attends the course. Part-time Study: Students attend 40% of the foreseen theoretical and practical lessons. The exam is carried out in exam sessions and is consists of: - Multiple choice test - Seminars Assessment of the overall exam is obtained according to the table grades, based on the sum of points from all activities.
Learning materials	Basic: authorized lectures of Cathedra: Jevtik M.: Biomechanics of the locomotor system. University of Kragujevac. Medical faculty. Kragujevac, 2004.

