**Incoming student mobility**

**UNIOS University Unit: Faculty of Dental Medicine and Health in Osijek**

**COURSES OFFERED IN FOREIGN LANGUAGE**

**FOR ERASMUS+ INDIVIDUAL INCOMING STUDENTS**

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| Department or Chair within the UNIOS Unit | Department of Anatomy, Histology, Embryology, Pathological Anatomy and Pathological Histology  Faculty of Dental Medicine and Health Osijek, Josip Juraj Strossmayer University of Osijek |

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| Study program | University Undergraduate Study in Physiotherapy |

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| Study level | 1st year |

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| Course title | Clinical kinesiology |
| Course code (if any) |  |
| Language of instruction | English |
| Brief course description | Introduction to kinesiology analysis of the movements of the human body: the principles of kinematics: osteokinematics, arthrokinematics; principles of kinetics: force, leverage, torque. Clinical aspects of physiology and neurophysiology: clinical application motor control normal movements: the conditions for exercising normal muscle contraction, normal tone of connective tissues and articular function through afferent - efferent neural pathways. Development of posture and postural adaptations of the human body. Normal movement - normal function and postural adaptation and differentiation of pathological movement - pathological function and postural adaptations. Kinesiological analysis spine: anatomical, physiological and biomechanical characteristics of the spine; function of muscles, joints and ligaments of the hull for postural development and maintenance of posture; function of dynamic vertebral segment in normal postural adaptation; intrinsic and extrinsic spinal stability in the analysis of normal function.  Kinesiological analysis of head, neck and trunk as a function of breathing; understanding of the functions of breathing, muscles and joints in breathing, pressure in vital body cavities in spontaneous and forced breathing. Kinesiological analysis of head and neck in the process of chewing, swallowing and facial expressions: anatomical, physiological and biomechanical characteristics of the temporomandibular joint, biomechanical principles of chewing and swallowing; characteristics of the muscle structure. Kinesiological analysis of the shoulder girdle: anatomical, physiological and biomechanical characteristics of the bones, joints, muscles and connective tissue in postural development and maintenance of normal posture, biomechanical mechanisms in the normal function of the shoulder girdle. Kinesiological analysis of the elbow, forearm and hand: anatomical, physiological and biomechanical characteristics of the bones, joints, muscles and connective tissue of the elbow and hand in postural development and maintenance of normal posture. The role of biomechanical mechanisms in the analysis function of the elbow and hand, and the differentiation of fine and gross motor skills hands. Kinesiological analysis of pelvic floor, pelvis and hip joint: anatomical, physiological and biomechanical characteristics of the bones, joints, muscles and connective tissue of the pelvis and hip in postural development and maintenance of normal posture; biomechanical principles of the functions of the pelvis and hip joint and the most common reasons for deviations from normal function. Kinesiological analysis of the knee: anatomic, physiological and biomechanical characteristics of the bones, joints, muscles and connective tissue knee in postural development and maintenance of normal posture .; biomechanical principles of knee function and the most common reasons for deviations from normal function.  Kinesiological foot analysis: anatomical, physiological and biomechanical characteristics of the bones, joints, muscles and connective tissue in postural development and maintenance of normal posture .; biomechanical function of the foot and the legality of the most common reasons for deviations from normal function. Peculiarities of the most common postural deviations. The applicability of the acquired knowledge into clinical practice for each segment of the body and the body as a whole.  Analysis and upright sitting position of the body; analysis of the transfer; Gait Analysis: muscular activity in the gait cycle, energy consumption in phases of walking, kind of walk, postural adaptation of individual body segments on the fly, clinical application of kinesiology analysis walk. Analysis of functional relationships of body segments using isokinetics. |
| Form of teaching | 45 class hours of Lectures (1 group)  30 class hours of Seminars (1 group)  30 class hours of Practical Classes (2 groups) |
| Form of assessment | Written and oral exam |
| Number of ECTS | 7 |
| Class hours per week | 35 |
| Minimum number of students | 30 |
| Period of realization | March,April |
| Lecturer | **Asst. Prof. Anđela Grgić, M.D., Ph.D.**  **Asst. Prof. Tihomil Žiger, M.D., Ph.D.**  **Toni Josić, MSc in Kinesiology**  **Ivan Perić, MSc in Kinesiology** |