

Information sheet for the course Kinesiology and Pathological Kinesiology I.

University: <i>Alexander Dubček University of Trenčín</i>	
Faculty: <i>Faculty of Health Care</i>	
Course unit code: <i>KIN1/d</i>	Course unit title: <i>Kinesiology and Pathological Kinesiology I.</i>
Type of course unit: <i>compulsory</i>	
Planned types, learning activities and teaching methods: <i>Lecture: 2 hours weekly/26 hours per semester of study; full-time</i>	
Number of credits: <i>2</i>	
Recommended semester: <i>3rd semester in the 2nd year (full-time)</i>	
Degree of study: <i>I (bachelor)</i>	
Course prerequisites: <i>Anatomy II., Muscle Test II.</i>	
Assessment methods: <i>The student will acquire 50 points per semester:</i> <i>- Active participation in lectures.</i> <i>- Test (50 points).</i> <i>To obtain the score A must be obtained at least 48 points, score B - 44 points, score C - 41 points, score D - 38 points and score E at least 35 points.</i>	
Learning outcomes of the course unit: <i>The student has knowledge about the movement regulation on the spinal and supraspinal level. Can describe different subsystems of myoskeletal system (postural, locomotor, manipulative, communication and respiratory) and to identify the most common manifestations of pathology in various systems with emphasis on postural-locomotor system. The acquired knowledge is able to apply in practice. The student is able to diagnose poor posture while standing and seated, pathological motor stereotypes and characterize the most common disorders of gait in patients with neurological and orthopaedic diagnosis.</i>	
Course contents: <i>1. Introduction to the Kinesiology (the role of kinesiology, history).</i> <i>2. Movement as a fundamental expression of life and the impact of movement on the human body.</i> <i>3. Analysis of motion (forces acting on the body mass, center of gravity, lever mechanics).</i> <i>4. Proprioceptors (muscle spindle, Golgi tendon corpuscle, gamma loop).</i> <i>5. Control the movement on the spinal level (structure of spinal cord, neurons in the spinal cord, horizontal and vertical joints, reflex arc, types of reflexes, motor unit).</i> <i>6. Control the movement on the supraspinal level (pyramidal and extrapyramidal system):</i> <ul style="list-style-type: none"><i>• cerebral cortex,</i><i>• basal ganglia,</i><i>• reticular formation,</i><i>• brainstem,</i><i>• cerebellum.</i> <i>7. Functional parts of musculoskeletal system (system postural, locomotor, manipulative, communication and respiratory).</i> <i>8. Gross motor skills (postural-locomotor system):</i> <ul style="list-style-type: none"><i>• postural system (kinesiological analysis of the axial system, functional movement segment and sector, physiology and pathology of posture while standing and sitting),</i><i>• locomotor system (kinesiological analysis of lower limbs),</i><i>• motor stereotypes (extension and abduction of the hip, abduction in shoulder joint,</i>	

walking and running).

Recommended of required reading:

1. VÉLE, F.: 2007. *Kineziologie -Přehled klinické kineziologie a patokineziologie pro diagnostiku a terapii poruch pohybové soustavy.* Triton, 2007, ISBN 80-7254-837-9.
2. DYLEVSKÝ, I.: 2009. *Kineziologie – Základy strukturální kineziologie.* Triton, 2009, ISBN 978-80-7387-324-0.
3. DYLEVSKÝ, I.: 2009. *Speciální kineziologie.* Grada, 2009, ISBN 978-80-247-1648-0.
4. GÚTH, A. et al.: 2009. *Fyziológia – neurofyziológia: vybrané kapitoly pre študentov v oblasti rehabilitácie a ošetrovateľstva.* Liečreh Gúth, 2009, ISBN 9788088932284.
5. KOLÁŘ, P. et al.: 2010. *Rehabilitace pro klinickou praxi.* Galén, 2010, ISBN 978-80-7262-6571.
6. LÁNIK, V.: 1990. *Kineziológia.* Osveta, 1990, ISBN 978-80-2170-136-6.
7. VÉLE, F.: 2012. *Vyšetření hybných funkcí z pohledu neurofyziologie.* Triton, 2012, ISBN 97-80-7387-608-1.

Language: *Slovak*

Remarks:

Evaluation history:

A	B	C	D	E	FX

Lectures:

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Last modification: 22.04.2014

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