Subject information sheet

**University:** *Comenius University in Bratislava*

**Faculty:** *Faculty of Physical Education and Sport*

| **Subject code:** | **Subject title:** *Sports kinesiology - VP* |
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**Type, range and method of educational activities:**
*2 hours of seminars*
*Presence, if necessary combined or distance method*

**Number of credits:** *4*

**Recommended semester/trimester of study:** *1st–2nd semester*

**Degree of study:** *II.*

**Course prerequisites:** *Functional anatomy*, *Human physiology*, *Biomechanics*

**Conditions for completing the course:**
*Seminar work – kinesiological analysis of a selected movement.*

*Evaluation:*
*A - 100 to 93 points, B - 92 to 85 points, C - 84 to 77 points, D - 76 to 69 points,*
*E - 68 to 61 points, FX - 60 points or less*

*Students are required to maintain a minimum of 80% attendance of scheduled classes in order to pass the course.*

**Learning outcomes:**
*Students will become familiar with theory of sports kinesiology. They will be able to apply the knowledge acquired in sports practice. They will develop skills needed for detailed analysis of human movement of everyday life and sport.*

**Brief course contents:**
*1. Characteristics of sports kinesiology – movement science.*
*2. Movement behavior patterns.*
*3. Kinesiological analysis of selected athletic movements.*

**Detailed course contents:**
*Topic 1 and outlines*
*Characteristics of sports kinesiology – movement science. Definition of kinesiology. History of kinesiology. Subdisciplines of kinesiology. Concept of sports kinesiology and its applications.*

*Topic 2 and outlines*
*Basic methods of the study of movements.*

*Topic 3 and outlines*
*Basic characteristics of movement. Targeted movements. Variability of the end-point trajectory.*

*Topic 4 and outlines*
*Theory of movement behavior (e.g., Bernstein's theory).*

*Topic 5 and outlines*
*Motor synergies. Motor redundancy. Principle of abundance.*

*Topic 6 and outlines*

*Single-joint and multi-joint movements. Examples of knowledge application of previous topics.*

*Topic 7 and outlines*
*Fine and gross motor skills. Movement coordination.*

*Topic 8 and outlines*
*Postural stability (anticipatory postural adjustments, corrective postural reactions, postural synergies).*

*Topic 9 and outlines*
*Locomotion (step initiation, gait, corrective stumbling reaction).*

*Topic 10 and outlines*
*Kinesiological analysis of a selected movement.*

*Topic 11 and outlines*
*Kinesiological analysis of a selected movement.*

*Topic 12 and outlines*
*Kinesiological analysis of a selected movement.*

*Topic 13 and outlines*
*Fulfilling course requirements.*

**Recommended literature:**

*ABERNETHY, B. et al. Biophysical foundations of human movement. Champaign, IL: Human Kinetics, 2013.*
*ENOKA, R. M.: Neuromechanics of human movement. Champaign, IL: Human Kinetics, 2002.*
*HOFFMAN, S. J. (Ed). Introduction to kinesiology: Studying physical activity. Champaign, IL: Human Kinetics, 2009.*
*LATASH, M. L. Neurophysiological basis of movement. Champaign, IL: Human Kinetics, 2008.*
*NIGG, B. M., MACINTOSH, B. R., MESTER, J.: Biomechanics and biology of movement. Champaign, IL: Human Kinetics, 2000.*

**Language, knowledge of which is necessary to complete the course:**
*English*

**Notes:**

**Evaluating history:**
Total number of evaluated students: *0*

| *A* | *B* | *C* | *D* | *E* | *FX* |
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**Lecturer:**. *prof. Mgr. Erika Zemková, PhD.*
*prof. PaedDr. Oľga Kyselovičová, PhD., doc. PaedDr. Jana Labudová, PhD., Mgr. Henrieta Horníková, PhD.*

**Last modification:**

**Supervisor:**
*prof. Mgr. Erika Zemková, PhD., doc. PaedDr. Branislav Antala, PhD.*