

## **APPLICATION OF REMEDIAL PE**

obligatory course

Branch: Physiotherapy

Year: 2<sup>nd</sup>

W 0/2 C

### Characterization:

Aim of the lessons in the learning is to present to students, who studied physiotherapy, a magnitude physical education of pupils with health impairment or health handicapped in our schools. According to Czech sport medicine association the pupils with such designation are classified into III. health group. This group of pupils is in our country very numerous and it is possible to help them with an appropriate movement education. Next it is important to explain and substantiate that professional conditions for such pupils are important, because in opposite case they mature with so yclept “changed working capability”. Physiotherapists could be workers who can help to create possibilities motional activities for such pupils. By the lessons they will acquire how to prepare such activities as for own health condition as for possible groups of pupils with health impairment or handicap.

### Content of the subject:

1. Introduction to the study. History of health physical education, its aim and asks. Categories of the health impairments. The structure of the lesson during application of corrective exercises. The basic compensatory means. Requirements to the credit.
2. Basic positions for compensatory exercises I. Phasic postural muscles and possibilities their balancing by movement patterns in basic positions.
3. Basic positions for compensatory exercises II. Tonic postural muscles and possibilities their balancing by movement patterns in basic positions.
4. Kinesiology of the cervical spine. Hyperlordosis of the cervical spine and corrective exercises to equilibrium of muscles which influence the right function of the cervical spine.
5. Interrelationship of muscles during hyperkyphotic carriage in thoracic spine. Corrective exercises by hyperkyphotic carriage in thoracic spine.
6. Main muscles, which influence movements in lumbar region of the spine and basic movements by pelvis. Corrective exercises by hyperlordotic curvature of the lumbar spine.
7. Meaning of physiological range of movement at the joints. Symmetrical, harmonious, slow, fluent and controlled movement - its magnitude when we train corrective exercises by persons with scoliotic carriage of the spine.
8. Recapitulation of corrective exercises by different deviations at the carriage of the spinal column.
9. Muscles of the hip, their function and interrelationship, their importance in the carriage of the pelvis and spinal column. Muscles which influence a god function of the ankle and foot. Propedeutic exercises for walking.
10. Breathing exercises at the theory and practice. Meanings of the breath and their interrelationship to the postural function. Diagnostics of breathing movements, breathing exercises without attendant movements of parts of the body.
11. Diaphragm, abdominal wall, pelvic floor muscles and their relation. Breathing exercises facilitating breathing in abdominal region. Breathing exercises with attendant movements of parts of the body.
12. Breathing exercises facilitating breathing movements in middle and upper parts of the ribcage. Exercises facilitating whole breath control.

13. Theory about relaxation exercises at health physical education. We will elucidate the functional connection between psychical tension, functional condition of vegetative nervous system and tension of muscular groups. Different forms of volitional relaxation exercises.
14. Encompassment the check corrective exercises for credit, achievement of the test from the study program.

**Requirements for achievement of the credit:**

- complete attendance
- achievement of the test from the study program
- achievement of the check corrective exercises

**Recommended literature:**

CALAIS-GERMAN, B. *Anatomy of Movement* : Seattle : Estland Press, incorporated P.O. box 99749, 1993. ISBN 0-939616-17-3.

ČUMPELÍK, J. VÉLE, F. *Yoga-Based Training for Spinal Stability*. In Liebenson, C. *Rehabilitation of the Spine*. Lippincott Williams and Wilkins, 2005. ISBN 07-81729-97-1.

FRANCLIN, E. *Dynamic alignment through imagery* : Champaign : Human Kinetics, P.O. Box 5076, 1996. 302 s. ISBN 0-87322-475-2.

ISHMAHEL, W. K., SHORBE, H. B. *Care of the back* : Philadelphia : Lippincott Williams & Wilkins, 1985. 32 s. ISBN 0-397-50710-0.

KAPANJI, I., A. *The physiology of joints* : London : Churchill Livingstone, , 1975. ISBN 0-443-01209-1.

SUNIL, V.J. *Ayurveda & Panchakarma {The Science of Healing and Rejuvenation}* : Twin Lakes, Wisconsin: Lotus Press, P.O. Box 325, 1997. 301 s. ISBN 0-914955-37-3.