



LITHUANIAN SPORTS UNIVERSITY

STUDY MODULE PROGRAMME (SMP)

Module Code	B	710	M	009	Accredited until			Renewal date
	Branch of Science		Progr.	Registr. №.				

Entitlement

Advanced Technology in Neuromuscular Physiotherapy

Prerequisites

BSc in Physiotherapy

Course (module) Learning Outcomes

№.	Learning Outcomes	Teaching / Learning Methods	Assessment Methods
1	Deepen knowledge about pain neuroscience in musculoskeletal physiotherapy.	Discussion, Formal lecture, Group work, Problem-based learning, Scientific paper analysis	Individual work, Reflection on action
2	Deepen knowledge about research methods in musculoskeletal physiotherapy: clinical effect	Formal lecture, Seminar	Reflection on action
3	Justify the assessment and intervention methods of different regions in musculoskeletal physiotherapy.	Formal lecture, Gests lectures, Scientific paper analysis	Reflection on action, Reporting for practice work
4	Critically analyze and understand application of multidimensional models as well as demonstrate new techniques in neck, lumbar spine, knee and ankle physiotherapy.	Case analysis (Case study), Exercise classes, Scientific paper analysis	Individual work, Reflection on action, Reporting for practice work

Main aim

To provide with deep musculoskeletal PT knowledge, to teach innovatively and critically analyze new PT technologies and methods based on science and proven clinical practice. To develop skills of musculoskeletal PT planning, organization and execution related to modern assessment and treatment strategies.

Summary

Course is intended for students of MSc in Physiotherapy. Students will be able to assess, evaluate musculoskeletal condition in complex cases; to differentiate pathological conditions and define the need of PT; to create PT programme and apply modern techniques.

Level of module

Level of programme		Subject group (under the regulation of the area)	Subject level
Cycle	Type		
Second	Master	Specialaus lavinimo	Deepening

Group under financial classification

9.Reabilitacija ir slauga, sportas (išskyrus trenerius)

Syllabus

№.	Sections and themes	Responsible lecturer
1.	Pain in the Musculoskeletal Physiotherapy.	
2.	Interactions between pain and sensorimotor control	
3.	The peripheral nervous system and its compromise in Entrapment Neuropathies	
4.	Ageing and the Musculoskeletal system	
5.	Non invasive brain stimulation in the measurement and treatment of musculoskeletal disorders. Ultrasound, movement analysis	
6.	Quantitative sensory testing: Implications for clinical practice	
7.	Clinical research to test treatment effects	

№.	Sections and themes	Responsible lecturer
8.	Pain control, educational models. Self-management and Self-help	
9.	Premanual screening in musculoskeletal physiotherapy.	
10.	Idiopathic neck pain, TMJ disorders: models of assessment and management	
11.	Multidimensional approach for the targeted management of low back pain.	
12.	A person-centred biopsychosocial approach to assessment and management of pelvic girdle pain.	
13.	Pain of the upper extremity joints. Critical viewpoint on assessment and treatment models.	
14.	Pain of the lower extremity joints. Critical viewpoint on assessment and treatment models.	
15.	Presentation of Innovative techniques of musculoskeletal interventions	

Evaluation procedure of knowledge and abilities:

References

№.	Title	Edition in Lithuanian Sports University library		In Lithuanian Sports University bookstore	Number of ex. in the methodical cabinet of the depart.
		Pressmark	Number of exemplars		
1.	Jull G., Moore, A., Falla, D. et al. (2015). Grieve's Modern Musculoskeletal Physiotherapy, 4e. Elsevier			No	
2.	Louw, A., Puentedura, E. (2013). Therapeutic Neuroscience Education 1st ed. International Spine Institute.			No	
3.	Ferguson, L.W., Gerwin, R. Clinical Mastery in the Treatment of Myofascial Pain. LWW			No	
4.	Magee, D. J. 2008. Orthopedic Physical Assessment. Philadelphia:Saunders			Yes	
5.	Skurvydas, Albertas. Modernioji neuroreabilitacija : judesių valdymas ir proto treniruotė : studijų knyga / 2011			Yes	

Additional literature

№.	Title
1.	Van Eerd D, et al. (2016). Effectiveness of workplace interventions in the prevention of upper extremity musculoskeletal disorders and symptoms: an update of the evidence. <i>Occup Environ Med</i> ;73:62–70
2.	Gutke A, et al. (2015). Treatments for pregnancy-related lumbopelvic pain: a systematic review of physiotherapy modalities. <i>Acta Obstet Gynecol Scand.</i> 94(11):1156-67.
3.	Monticone M, et al. (2015). Cognitive-behavioural treatment for subacute and chronic neck pain. <i>Cochrane Database Syst Rev.</i> 26;5:CD010664. doi:0.1002/14651858.CD010664.pub2.
4.	Manchikanti L1, Hirsch JA. (2015). Clinical management of radicular pain. <i>Expert Rev Neurother.</i> 15(6):681-93.
5.	Rathleff MS (2016). Effect of exercise therapy on neuromuscular activity and knee strength in female adolescents with patellofemoral pain-An ancillary analysis of a cluster randomized trial. <i>Clin Biomech</i> , 11;34:22-29.
6.	Stracciolini A, et al. (2016). Sex and growth effect on pediatric hip injuries presenting to sports medicine clinic. <i>J Pediatr Orthop</i> , Apr 7. [Epub ahead of print]
7.	Lentz TA, et al. (2016). Development of a Yellow Flag Assessment Tool for Orthopaedic Physical Therapists: Results From the Optimal Screening for Prediction of Referral and Outcome (OSPRO) Cohort. <i>J Orthop Sports Phys Ther.</i> , 21:1-45.
8.	Brotzman, S.B., Wilk, K.E. (2007). <i>Handbook of Orthopaedic Rehabilitation.</i> Mosby Elsevier

