



LITHUANIAN SPORTS UNIVERSITY

STUDY MODULE PROGRAMME (SMP)

Module Code	B	710	B	124	Accredited until				Renewal date		
	Branch of Science		Progr.	Registr. №.							

Entitlement

Physiotherapy in Orthopedics and Traumatology

Prerequisites

Modules of Biomedical sciences, Basics in Physiotherapy, Kinesiology

Course (module) Learning Outcomes

№.	Learning Outcomes	Teaching / Learning Methods	Assessment Methods
1	To be able constructively criticize, give reasonable comments, accept constructive criticism, and modify activities according critical appraisal.	Exercise classes, Group work, Simulation of real-life (world) situations	Reporting for practice work
2	To be able to learn and work independently and take responsibility for it. To be able to integrate basics of the scientific methodology into module tasks.	Literature analysis, Practical exercises (tasks), Scientific paper analysis	Mid-term examination, Reporting for practice work, Scientific paper (text) analysis, Test
3	To be able to examine injuries or damage of skeletal muscles, bones, ligaments and tendons, examine functional status of the patients and interpret findings applying modern and proven methods.	Formal lecture, Group work, Literature analysis, Scientific paper analysis, Simulation of real-life (world) situations	Mid-term examination, Reporting for practice work, Test
4	To be able to distinguish the signs and symptoms of of diseases and conditions, to know the contraindications for PT and understand the factors that might affect the general and specific health condition.	Formal lecture, Literature analysis, Scientific paper analysis	Mid-term examination
5	Communicate with patients, customers and other related parties in accordance with the general and medical ethics, moral and legal norms.	Simulation of real-life (world) situations	Reporting for practice work
6	To be able to perform physical therapy procedures using scientifically based and clinical practice proven methods and tools.	Group work, Literature analysis, Practical exercises (tasks), Scientific paper analysis, Simulation of real-life (world) situations	Mid-term examination, Reporting for practice work

Main aim

Develop the ability based on biomedical science and proven expertise to examine and treat orthopedic patient who had experienced trauma, has skeletal-muscle system pathologies, orthopedic conditions, rheumatic disease. Develop the ability to interpret findings of examination, to define the need of PT and set appropriate goals also apply inovative and effective PT methods and means.

Summary

The module provides the latest, science-based orthopedic, trauma, and rheumatologic patient testing and physical therapy principles, methods and tools. Students assimilate theoretical knowledge related to structure and function and damage of each anatomical region. Students gain practical skills of patient examination and application of PT methods and techniques. Analysis of the area relevant scientific articles is included into module activities.

Level of module

Level of programme		Subject group (under the regulation of the area)
Cycle	Type	
First	Bachelor	Bendrojo universitetinio lavinimo

Group under financial classification

Syllabus

No.	Sections and themes	Responsible lecturer
1.	Introduction. Structure of the module. Evaluation criteria	
2.	Cervical spine anatomy and kinesiology. Cervical spine injuries.	
3.	Cervical spine examination. Special tests.	
4.	Cervical spine treatment.	
5.	Cervical spine fractures and PT	
6.	Thoracic spine anatomy and kinesiology.	
7.	Thoracic spine treatment.	
8.	Shoulder anatomy and kinesiology.	
9.	Shoulder complex injuries and orthopaedic conditions.	
10.	Shoulder complex examination. Special tests.	
11.	Shoulder complex treatment.	
12.	Elbow and forearm examination. Special tests.	
13.	Elbow and forearm treatment.	
14.	Wrist and hand anatomy and kinesiology. Injuries and orthopaedic conditions.	
15.	Treatment, physiotherapy in wrist and hand injuries.	
16.	Anatomy and kinesiology of lumbar spine.	
17.	Pathology, orthopaedic disorders and injuries of lumbar spine.	
18.	Examination, functional movements and special tests of lumbar spine.	
19.	Physiotherapy in lumbar spine disorders. McKenzie concept, therapeutic exercises.	
20.	Mobilisation of the spine. Education of the patient.	
21.	Red Cord in treatment of lumbar spine disorders.	
22.	Pelvis injuries and orthopedic problems. Examination, special tests.	
23.	Physiotherapy in pelvis injuries and orthopedic problems.	
24.	Hip injuries and orthopedic problems. Examination of the hip.	
25.	Knee anatomy and kinesiology. Knee injuries and pathology.	
26.	Knee examination, special tests.	
27.	Knee treatment and physiotherapy.	
28.	Ankle and foot anatomy and kinesiology. Orthopedic problems.	
29.	Ankle and foot examination, conservative treatment and surgery, physiotherapy.	
30.	Amputation, indications, levels, pain. Examination of the amputee.	
31.	Burns, scars, treatment, physiotherapy and soft tissue mobilisations.	
32.	Orthosis and prosthesis.	
33.	Rheumatology and physiotherapy. Musculoskeletal reactions to rheumatological conditions.	
34.	Examination of the rheumatological patient.	
35.	Physical agents in rheumatology.	
36.	Scleroderma, polymyositis, dermatomyositis, systemic lupus erythematosus and physiotherapy.	
37.	Spondyloarthropaties, ankylosing spondilitis, rheumatoid arthritis. Patient examination and physiotherapy.	
38.	Osteoarthritis, symptoms, examination and physiotherapy.	

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.	Gray's Anatomy: The Anatomical Basis of Clinical Practice, Expert Consult, 40th Edition			No	1
2.	Žmogaus anatomija			No	
3.	Kinesiology of the Musculoskeletal System, 2nd Edition			No	1
4.	Orthopedic Physical Assessment, 6th Edition			No	1
5.	Susan L. Edmond, Sąnarių mobilizacija, manipuliacija. Technikos, skirtos galūnių sąnariams ir stuburui, ISBN: 9786094540608, Puslapių skaičius: 360, Leidėjas: Vitae Litera, 2012			No	1

Additional literature

№.	Title
1.	John D. Childs et al., Neck pain. J Orthop Sports Phys Ther 2008;38(9):A1-A34.
2.	Paul E. Mintken et al., Upper Cervical Ligament Testing in a Patient With Os Odontoideum Presenting With Headaches J Orthop Sports Phys Ther 2008;38(8):465-475
3.	Ariel Desjardins-Charbonneau et al., The Efficacy of Manual Therapy for Rotator Cuff Tendinopathy: A Systematic Review and Meta-analysis, J Orthop Sports Phys Ther 2015;45(5):330-350
4.	Michael M. Reinold et al., Current Concepts in the Scientific and Clinical Rationale Behind Exercises for Glenohumeral and Scapulothoracic Musculature , J Orthop Sports Phys Ther 2009;39(2):105-117
5.	Martin J. Kelley et al., Shoulder Pain and Mobility Deficits: Adhesive Capsulitis J Orthop Sports Phys Ther 2013;43(5):A1-A31
6.	Amrith O. Chourasia et al., Relationships Between Biomechanics, Tendon Pathology, and Function in Individuals With Lateral Epicondylitis J Orthop Sports Phys Ther 2013;43(6):368-378
7.	Joshua I. Vincent Validity and Sensitivity to Change of Patient-Reported Pain and Disability Measures for Elbow Pathologies , J Orthop Sports Phys Ther 2013;43(4):263-274
8.	Christopher J. Buscema Scaphoid Fracture in a Patient After a Fall J Orthop Sports Phys Ther 2012;42(6):568
9.	Anthony Delitto et al., Low Back Pain. J Orthop Sports Phys Ther 2012;42(4):A1-A57
10.	Association Between Changes in Electromyographic Signal Amplitude and Abdominal Muscle Thickness in Individuals With and Without Lumbopelvic Pain, Authors: Jackie L. Whittaker, Linda McLean, Joanne Hodder, Martin B. Warner, Maria J. Stokes, J Orthop Sports Phys Ther 2013;43(7):466-477. doi:10.2519/jospt.2013.4440, Full text: http://www.jospt.org/doi/abs/10.2519/jospt.2013.4440#.VY0SHIJSpec
11.	Nonarthritic Hip Joint Pain Clinical Practice Guidelines Linked to the International Classification of Functioning, Disability and Health From the Orthopaedic Section of the American Physical Therapy Association, Authors: Keelan Enseki, Marcie Harris-Hayes, Douglas M. White, Michael T. Cibulka, Judith Woehrle, Timothy L. Fagerson, John C. Clohisy J Orthop Sports Phys Ther. 2014;44(6):A1-A32.
12.	Knee Pain and Mobility Impairments: Meniscal and Articular Cartilage Lesions, Authors: David S. Logerstedt, Lynn Snyder-Mackler, Richard C. Ritter, Michael J. Axe, Joseph Godges, J Orthop Sports Phys Ther 2010;40(6):A1-597. doi:10.2519/jospt.2010.0304, Full text: http://www.jospt.org/doi/abs/10.2519/jospt.2010.0304#.VY00AVJSpec
13.	Ankle Stability and Movement Coordination Impairments: Ankle Ligament Sprains Authors: Robroy L. Martin, Todd E. Davenport, Stephen Paulseth, Dane K. Wukich, Joseph J. Godges, J Orthop Sports Phys Ther 2013;43(9):A1-A40. doi:10.2519/jospt.2013.0305, Full text: http://www.jospt.org/doi/abs/10.2519/jospt.2013.0305#.VY0MyVJSpec

№.	Title
14.	Achilles Pain, Stiffness, and Muscle Power Deficits: Achilles Tendinitis, Authors: Christopher R. Carcia, Robroy L. Martin, Jeff Houck, Dane K. Wukich, J Orthop Sports Phys Ther 2010;40(9):A1-A26. doi:10.2519/jospt.2010.0305, http://www.jospt.org/doi/abs/10.2519/jospt.2010.0305#.VY0Ny1JSpec
15.	Frank H. Netter, Atlas of Human Anatomy: Including Student Consult Interactive Ancillaries and Guides, 6th Edition (Netter Basic Science), ISBN-13: 978-1455704187, ISBN-10: 1455704180, Publisher: Saunders, (2014), 640 pages.
16.	A. Baranauskaitė, E. Eviltis, G. Labanauskaitė-Šliumbienė, Reumatologijos pagrindai, Leidėjas: Vitae Litera, 2010, Puslapiai: 118, ISBN: 9789955920809
17.	Pavelas Zachovajevas, Gražina Garbenienė, Giedra Bušmanienė ir kt., Klubo sąnario artrozė ir endoprotezavimas. Kineziologija ir kineziterapija, Leidėjas: LSMU Leidybos namai, 2014, Puslapių skaičius: 150, ISBN: 9789955153443.
18.	Susan L. Edmond, Sąnarių mobilizacija, manipuliacija. Technikos, skirtos galūnių sąnariams ir stuburui, ISBN: 9786094540608, Puslapių skaičius: 360, Leidėjas: Vitae Litera, 2012

Coordinating lecturer

Position	Degree, surname, name	Schedule №.
Associate Professor		670

Subdivision

Entitlement	Code
	40

Study module teaching form №. 1

Semester	Mode of studies	Structure				Total hours	Credits	
		Theory	Seminars	Lab Works	Ind. work			
A	S	D	25	0	65	170	260	10

Languages of instruction:

Lithuanian	L	English	E	Russian	R	French	F	German	G	Other	Oth.
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Plan of in-class hours

№. of Themes	Academic hours			№. of Themes	Academic hours		
	Theory	Seminars	Lab Works		Theory	Seminars	Lab Works
1.	1	0	0	20.	0	0	1
2.	1	0	0	21.	0	0	1
3.	0	0	4	22.	1	0	2
4.	0	0	4	23.	0	0	3
5.	1	0	1	24.	1	0	2
6.	0	0	2	25.	2	0	0
7.	0	0	3	26.	1	0	3
8.	1	0	0	27.	1	0	4
9.	1	0	0	28.	1	0	0
10.	0	0	4	29.	0	0	4
11.	0	0	6	30.	1	0	1
12.	1	0	2	31.	0	0	2
13.	0	0	3	32.	0	0	1
14.	1	0	0	33.	1	0	0
15.	0	0	3	34.	1	0	0
16.	1	0	0	35.	1	0	0
17.	2	0	0	36.	1	0	0
18.	0	0	3	37.	1	0	1
19.	1	0	3	38.	1	0	2
				Total:	25	0	65

