



LITHUANIAN SPORTS UNIVERSITY

STUDY MODULE PROGRAMME (SMP)

Module Code	B	710	B	143	Accredited until				Renewal date		
	Branch of Science		Progr.	Registr. №.							

Entitlement

Physiotherapy in Orthopedics and Traumatology II

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 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 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.	Orthopaedic conditions and injuries of lumbar spine.	
3.	Examination, functional movements and special tests of lumbar spine.	
4.	Physiotherapy in lumbar spine disorders. McKenzie concept, therapeutic exercises.	
5.	Mobilisation of the spine. Education of the patient.	
6.	Red Cord in treatment of lumbar spine disorders.	
7.	Pelvis injuries and orthopedic problems. Examination, special tests.	
8.	Physiotherapy in pelvis injuries and orthopedic problems.	
9.	Hip injuries and orthopedic problems. Examination of the hip.	
10.	Hip treatment and physiotherapy.	
11.	Knee injuries and orthopaedic conditions.	
12.	Knee examination, special tests.	
13.	Knee treatment and physiotherapy.	
14.	Ankle and foot orthopaedic conditions.	
15.	Ankle and foot examination, conservative treatment and surgery, physiotherapy.	
16.	Amputation, indications, levels, pain. Examination of the amputee.	
17.	Scars, treatment, physiotherapy and soft tissue mobilisations.	
18.	Orthosis and prosthesis.	
19.	Rheumatology and physiotherapy. Musculoskeletal reactions to rheumatological conditions.	
20.	Examination of the rheumatological patient.	
21.	Physical agents in rheumatology.	
22.	Scleroderma, polymyositis, dermatomyositis, systemic lupus erythematosus and physiotherapy.	
23.	Spondyloarthropathies, ankylosing spondylitis, rheumatoid arthritis. Patient examination and physiotherapy.	
24.	Osteoarthritis, symptoms, examination and physiotherapy.	

Evaluation procedure of knowledge and abilities:

References

No.	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, 2013			No	1

№.	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		
5.	Susan L. Edmond, Sąnarių mobilizacija, manipuliacija. Technikos, skirtos galūnių sąnariams ir stuburui, ISBN: 9786094540608, Pustlapių skaičius: 360, Leidėjas: Vitae Litera, 2012			No	1

Additional literature

№.	Title
1.	Liang, L., Feng, M., Cui, X., Zhou, S., Yin, X., Wang, X., Yang, M., Liu, C., Xie, R., Zhu, L., Yu, J., & Wei, X. (2019). The effect of exercise on cervical radiculopathy: A systematic review and meta-analysis. <i>Medicine</i> , 98(45), e17733. https://doi.org/10.1097/MD.00000000000017733
2.	Romeo, A., Vanti, C., Boldrini, V., Ruggeri, M., Guccione, A. A., Pillastrini, P., & Bertozzi, L. (2018). Cervical Radiculopathy: Effectiveness of Adding Traction to Physical Therapy-A Systematic Review and Meta-Analysis of Randomized Controlled Trials. <i>Physical therapy</i> , 98(4), 231–242. https://doi.org/10.1093/physth/pzy001
3.	González-Gálvez, N., Gea-García, G. M., & Marcos-Pardo, P. J. (2019). Effects of exercise programs on kyphosis and lordosis angle: A systematic review and meta-analysis. <i>PloS one</i> , 14(4), e0216180. https://doi.org/10.1371/journal.pone.0216180
4.	Masaracchio, M., Kirker, K., States, R., Hanney, W. J., Liu, X., & Kolber, M. (2019). Thoracic spine manipulation for the management of mechanical neck pain: A systematic review and meta-analysis. <i>PloS one</i> , 14(2), e0211877. https://doi.org/10.1371/journal.pone.0211877
5.	Lam, O. T., Strenger, D. M., Chan-Fee, M., Pham, P. T., Preuss, R. A., & Robbins, S. M. (2018). Effectiveness of the McKenzie Method of Mechanical Diagnosis and Therapy for Treating Low Back Pain: Literature Review With Meta-analysis. <i>The Journal of orthopaedic and sports physical therapy</i> , 48(6), 476–490. https://doi.org/10.2519/jospt.2018.7562
6.	Wang, W., Long, F., Wu, X., Li, S., & Lin, J. (2022). Clinical Efficacy of Mechanical Traction as Physical Therapy for Lumbar Disc Herniation: A Meta-Analysis. <i>Computational and mathematical methods in medicine</i> , 2022, 5670303. https://doi.org/10.1155/2022/5670303
7.	Jacobi, S., Beynon, A., Dombrowski, S. U., Wedderkopp, N., Witherspoon, R., & Hébert, J. J. (2021). Effectiveness of Conservative Nonpharmacologic Therapies for Pain, Disability, Physical Capacity, and Physical Activity Behavior in Patients With Degenerative Lumbar Spinal Stenosis: A Systematic Review and Meta-Analysis. <i>Archives of physical medicine and rehabilitation</i> , 102(11), 2247–2260.e7. https://doi.org/10.1016/j.apmr.2021.03.033
8.	Challoumas, D., Biddle, M., McLean, M., & Millar, N. L. (2020). Comparison of Treatments for Frozen Shoulder: A Systematic Review and Meta-analysis. <i>JAMA network open</i> , 3(12), e2029581. https://doi.org/10.1001/jamanetworkopen.2020.29581
9.	Sung, J. H., Lee, J. M., & Kim, J. H. (2022). The Effectiveness of Ultrasound Deep Heat Therapy for Adhesive Capsulitis: A Systematic Review and Meta-Analysis. <i>International journal of environmental research and public health</i> , 19(3), 1859. https://doi.org/10.3390/ijerph19031859
10.	Saito, H., Harrold, M. E., Cavalheri, V., & McKenna, L. (2018). Scapular focused interventions to improve shoulder pain and function in adults with subacromial pain: A systematic review and meta-analysis. <i>Physiotherapy theory and practice</i> , 34(9), 653–670. https://doi.org/10.1080/09593985.2018.1423656
11.	Satpute, K., Reid, S., Mitchell, T., Mackay, G., & Hall, T. (2022). Efficacy of mobilization with movement (MWM) for shoulder conditions: a systematic review and meta-analysis. <i>The Journal of manual & manipulative therapy</i> , 30(1), 13–32. https://doi.org/10.1080/10669817.2021.1955181
12.	Karanasios, S., Tsamasiotis, G. K., Michopoulos, K., Sakellari, V., & Gioftsos, G. (2021). Clinical effectiveness of shockwave therapy in lateral elbow tendinopathy: systematic review and meta-analysis. <i>Clinical rehabilitation</i> , 35(10), 1383–1398. https://doi.org/10.1177/02692155211006860

No.	Title
13.	Gutiérrez-Espinoza, H., Araya-Quintanilla, F., Olguín-Huerta, C., Valenzuela-Fuenzalida, J., Gutiérrez-Monclus, R., & Moncada-Ramírez, V. (2022). Effectiveness of manual therapy in patients with distal radius fracture: a systematic review and meta-analysis. <i>The Journal of manual & manipulative therapy</i> , 30(1), 33–45. https://doi.org/10.1080/10669817.2021.1992090
14.	Davenport, M. H., Marchand, A. A., Mottola, M. F., Poitras, V. J., Gray, C. E., Jaramillo Garcia, A., Barrowman, N., Sobierajski, F., James, M., Meah, V. L., Skow, R. J., Riske, L., Nuspl, M., Nagpal, T. S., Courbalay, A., Slater, L. G., Adamo, K. B., Davies, G. A., Barakat, R., & Ruchat, S. M. (2019). Exercise for the prevention and treatment of low back, pelvic girdle and lumbopelvic pain during pregnancy: a systematic review and meta-analysis. <i>British journal of sports medicine</i> , 53(2), 90–98. https://doi.org/10.1136/bjsports-2018-099400
15.	Mapinduzi, J., Ndacayisaba, G., Mahaudens, P., & Hidalgo, B. (2022). Effectiveness of motor control exercises versus other musculoskeletal therapies in patients with pelvic girdle pain of sacroiliac joint origin: A systematic review with meta-analysis of randomized controlled trials. <i>Journal of back and musculoskeletal rehabilitation</i> , 35(4), 713–728. https://doi.org/10.3233/BMR-210108
16.	Goh, S. L., Persson, M. S. M., Stocks, J., Hou, Y., Lin, J., Hall, M. C., Doherty, M., & Zhang, W. (2019). Efficacy and potential determinants of exercise therapy in knee and hip osteoarthritis: A systematic review and meta-analysis. <i>Annals of physical and rehabilitation medicine</i> , 62(5), 356–365. https://doi.org/10.1016/j.rehab.2019.04.006
17.	Saueressig, T., Owen, P. J., Zebisch, J., Herbst, M., & Belavy, D. L. (2021). Evaluation of Exercise Interventions and Outcomes After Hip Arthroplasty: A Systematic Review and Meta-analysis. <i>JAMA network open</i> , 4(2), e210254. https://doi.org/10.1001/jamanetworkopen.2021.0254
18.	Domínguez-Navarro, F., Igual-Camacho, C., Silvestre-Muñoz, A., Roig-Casasús, S., & Blasco, J. M. (2018). Effects of balance and proprioceptive training on total hip and knee replacement rehabilitation: A systematic review and meta-analysis. <i>Gait & posture</i> , 62, 68–74. https://doi.org/10.1016/j.gaitpost.2018.03.003
19.	Kovacevic, D., Suriani, R. J., Jr, Grawe, B. M., Yian, E. H., Gilotra, M. N., Hasan, S. A., Srikumaran, U., Hasan, S. S., Cuomo, F., Burks, R. T., Green, A. G., Nottage, W. M., Theja, S., Kassam, H. F., Saad, M. A., Ramirez, M. A., Stanley, R. J., Williams, M. D., Nadarajah, V., Konja, A. C., ... American Shoulder and Elbow Surgeons Massive Cuff Evaluation and Research Initiative (ASES MERIT) Investigators (2020). Management of irreparable massive rotator cuff tears: a systematic review and meta-analysis of patient-reported outcomes, reoperation rates, and treatment response. <i>Journal of shoulder and elbow surgery</i> , 29(12), 2459–2475. https://doi.org/10.1016/j.jse.2020.07.030
20.	Nunes, G. S., Feldkircher, J. M., Tessarin, B. M., Bender, P. U., da Luz, C. M., & de Noronha, M. (2021). Kinesio taping does not improve ankle functional or performance in people with or without ankle injuries: Systematic review and meta-analysis. <i>Clinical rehabilitation</i> , 35(2), 182–199. https://doi.org/10.1177/0269215520963846
21.	Deflorin, C., Hohenauer, E., Stoop, R., van Daele, U., Clijssen, R., & Taeymans, J. (2020). Physical Management of Scar Tissue: A Systematic Review and Meta-Analysis. <i>Journal of alternative and complementary medicine (New York, N.Y.)</i> , 26(10), 854–865. https://doi.org/10.1089/acm.2020.0109
22.	A. Baranauskaitė, E. Eviltis, G. Labanauskaitė-Šliumbienė, Reumatologijos pagrindai, Leidėjas: Vitae Litera, 2010, Puslapiai: 118, ISBN: 9789955920809
23.	Pavelas Zachovajevs, Gražina Garbenienė, Giedra Bušmanienė ir kt., Klubo sąnario artrozė ir endoprotezavimas. Kineziologija ir kineziterapija, Leidėjas: LSMU Leidybos namai, 2014, Puslapių skaičius: 150, ISBN: 9789955153443.
24.	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 №.

Subdivision

Entitlement	Code
Health promotion and rehabilitation	40

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Credits

Languages of instruction:

Oth.

Plan of in-class hours

Lab Works

Schedule of individual work tasks and their influence on final grade

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17-20
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