

## LITHUANIAN SPORTS UNIVERSITY

## STUDY MODULE PROGRAMME (SMP)

| Entitlement         Basics of Physiotherapy II         Prerequisites         Anatomy, physiology.         Main aim         To introduce students to clinical thinking, research methods. To teach palpation, goniometry, manual muscle testing.         Provided knowledge and abilities         To be able to find and understand the modern scientific ideas that arise from fundamental and applied science and practice. To be able to adapt to new situations and make responsible and informed decisions, using acquired information and skills. To be able to creatively and continually learn from the modern fundamental and applied scientific achievements and creative use of professional activities. To be able to manage their time, information, creative thinking by acting as a leader. To be able to apply scientific achievements in planting or exemising out optimized. |  |  |  |  |  |  |  |  |  |  |  |
|---|--|--|--|--|--|--|--|--|--|--|--|
| Basics of Physiotherapy II         Prerequisites         Anatomy, physiology.         Main aim         To introduce students to clinical thinking, research methods. To teach palpation, goniometry, manual muscle testing.         Provided knowledge and abilities         To be able to find and understand the modern scientific ideas that arise from fundamental and applied science and practice. To be able to adapt to new situations and make responsible and informed decisions, using acquired information and skills. To be able to creatively and continually learn from the modern fundamental and applied scientific achievements and creative use of professional activities. To be able to manage their time, information, creative thinking by acting as a leader. To be able to apply scientific achievements in plancing organizing and comming out activities.          |  |  |  |  |  |  |  |  |  |  |  |
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| testing.<br>Provided knowledge and abilities<br>To be able to find and understand the modern scientific ideas that arise from fundamental and applied science<br>and practice. To be able to adapt to new situations and make responsible and informed decisions, using<br>acquired information and skills. To be able to creatively and continually learn from the modern fundamental<br>and applied scientific achievements and creative use of professional activities. To be able to manage their<br>time, information, creative thinking by acting as a leader. To be able to apply scientific achievements in<br>planning, promising and applied scientific achievements in   |  |  |  |  |  |  |  |  |  |  |  |
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| To be able to find and understand the modern scientific ideas that arise from fundamental and applied science<br>and practice. To be able to adapt to new situations and make responsible and informed decisions, using<br>acquired information and skills. To be able to creatively and continually learn from the modern fundamental<br>and applied scientific achievements and creative use of professional activities. To be able to manage their<br>time, information, creative thinking by acting as a leader. To be able to apply scientific achievements in<br>planning, propriation and complete activities.   |  |  |  |  |  |  |  |  |  |  |  |
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| acquired information and skills. To be able to creatively and continually learn from the modern fundamental<br>and applied scientific achievements and creative use of professional activities. To be able to manage their<br>time, information, creative thinking by acting as a leader. To be able to apply scientific achievements in  |  |  |  |  |  |  |  |  |  |  |  |
| time, information, creative thinking by acting as a leader. To be able to apply scientific achievements in  |  |  |  |  |  |  |  |  |  |  |  |
| niormation, creative timiking by acting as a reader. To be dole to apply scientific achievements in   |  |  |  |  |  |  |  |  |  |  |  |
| Diaming, organizing and carrying out activities.  |  |  |  |  |  |  |  |  |  |  |  |
| Summary   |  |  |  |  |  |  |  |  |  |  |  |
| Clinical reasoning. Examination and assessment of the patient. Basics of functional research. Palpation.  |  |  |  |  |  |  |  |  |  |  |  |
| Palpation of anatomical structures of the body. Goniometry. Measurement and assessment of all joint   |  |  |  |  |  |  |  |  |  |  |  |
| amplitudes. Manual muscle testing. Determination and evaluation of the strength of the main muscle groups.  |  |  |  |  |  |  |  |  |  |  |  |
| 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  |  |  |  |  |  |  |  |  |  |  |  |
| №.     Responsible       Sections and themes     lecturor   |  |  |  |  |  |  |  |  |  |  |  |
| 1 Physical factors and their use in physiotherapy   |  |  |  |  |  |  |  |  |  |  |  |
| The basics of functional research in physiotherapy. Subjective and objective patient  |  |  |  |  |  |  |  |  |  |  |  |
| 2. examination  |  |  |  |  |  |  |  |  |  |  |  |
| 2 Use of subjective and objective patient examination methods in clinical practice and  |  |  |  |  |  |  |  |  |  |  |  |
| <sup>5.</sup> research  |  |  |  |  |  |  |  |  |  |  |  |
| 4. Somatoscopy and antropometry   |  |  |  |  |  |  |  |  |  |  |  |
| 5. Pain, its evaluation and classification.   |  |  |  |  |  |  |  |  |  |  |  |
| 6. Aging and physiotherapy  |  |  |  |  |  |  |  |  |  |  |  |
| Clinical reasoning, examination and planing and prognosis in Physiotherapy.   |  |  |  |  |  |  |  |  |  |  |  |
| Cyriax Methodology.   |  |  |  |  |  |  |  |  |  |  |  |
| Functional tests in Physiotherapy Surface endtropy Delection and its techniques   |  |  |  |  |  |  |  |  |  |  |  |
| Conjometry  |  |  |  |  |  |  |  |  |  |  |  |
| Manual muscle testing   |  |  |  |  |  |  |  |  |  |  |  |
| mobility mobilization Passive and active techniques   |  |  |  |  |  |  |  |  |  |  |  |
| Infection control (hand hygiene, direct contact infections, hospital-based infections,  |  |  |  |  |  |  |  |  |  |  |  |
| 14. sterilization, disinfection).   |  |  |  |  |  |  |  |  |  |  |  |
| Sterilization, disinfection).   |  |  |  |  |  |  |  |  |  |  |  |

| №.  | Sections and themes  | Responsible<br>lecturer |
|-----|--|-------------------------|
| 16  | Anatomy of the anterior, posterior, lateral and medial surfaces of the neck and torso. |                         |
| 10. | Palpation of bones, muscles, ligaments, tendons, blood vessels.                        |                         |
| 17  | Anatomy of the anterior and posterior surfaces of the shoulders. Palpation of bone and |                         |
| 17. | muscle structures, tendons.  |                         |
| 18  | Anatomy of the anterior and posterior surface of the upper limb. Palpation of bones,   |                         |
| 10. | muscles, ligaments, tendons, blood vessels and nerves.                                 |                         |
| 19  | Anatomy of the anterior, posterior, lateral and medial surfaces of the pelvis, hip and |                         |
| 17. | thigh. Palpation of bones, muscles, ligaments, tendons, blood vessels and nerves.      |                         |
| 20  | Anatomy of the anterior, posterior, lateral and medial surfaces of the lower limb.     |                         |
| 20. | Palpation of bones, muscles, ligaments, tendons, blood vessels and nerves.             |                         |
| 21. | Goniometry. Joint end feel types. Examination and evaluation.                          |                         |
| 22  | Examination and evaluation of the amplitudes of the neck, torso, upper limb            |                         |
| 22. | movements.   |                         |
| 23. | Investigation and evaluation of lower limb motion amplitudes.                          |                         |
| 24. | MMT: Neck and trunk.   |                         |
| 25. | MMT: shoulder and upper limb.  |                         |
| 26. | MMT: lower limb.   |                         |

Teaching/learning methods: Lectures, seminars, practical classes, case studies, group and individual tasks of different extent, disscussions

Evaluation procedure of knowledge and abilities:

## References

| №. | Title   | Edition in<br>Sports U<br>libr | Lithuanian<br>niversity<br>ary<br>Number of | In Lithuanian<br>Sports<br>University<br>bookstore | Number of<br>ex. in the<br>methodical<br>cabinet of |  |  |
|----|---|--------------------------------|---|--|---|--|--|
|    |   | FICSSIIIAIK                    | exemplars                                   | DOOKSTOTE  | the depart.   |  |  |
| 1. | Stropus, R., Tamašauskas, K.A., Paužienė, N.<br>(2005). Žmogaus anatomija. Vitae Litera, Kaunas,<br>p. 512.   | 611 Ta75                       | 80  | Yes  |   |  |  |
| 2. | Neumann, D. A. (2013). Kinesiology of the<br>musculoskeletal system: foundations for<br>rehabilitation. Elsevier Health Sciences.   |                                |   | No   | 1   |  |  |
| 3. | Dreeben-Irimia, O. (2013). Physical therapy clinical handbook for PTAs. Jones & Bartlett Publishers. 2nd edition.   |                                |   | No   | 1   |  |  |
| 4. | O'Sullivan, S. B., Schmitz, T. J., & Fulk, G. (2013).<br>Physical rehabilitation. FA Davis.   |                                |   | No   | 1   |  |  |
| 5. | Kendall, F. P., McCreary, E. K., Provance, P. G.,<br>Rodgers, M. M., & Romani, W. A. (2005).<br>Muscles: Testing and Function, with Posture and<br>Pain (Kendall, Muscles). Philadelphia: Lippincott<br>Williams & Wilkins. |                                |   | No   | 1   |  |  |
| 6. | Muscolino, J. E. (2013). Know the Body: Muscle,<br>Bone, and Palpation Essentials-E-Book. Elsevier<br>Health Sciences.  |                                |   | No   | 1   |  |  |
| 7. | Reese, N. B., & Bandy, W. D. (2016). Joint Range<br>of Motion and Muscle Length Testing-E-Book.<br>Elsevier Health Sciences.  |                                |   | No   | 1   |  |  |
| 8. | Muntianaitė, Inga (2018). Pečių lanko kineziologija ir kineziterapija : mokomoji knyga  | 615.825<br>Mu59                | 1   | Yes  | 1   |  |  |

| NG.  | T:41-   | Title Edition in Lithuanian<br>Sports University<br>library Sports |                 |                         |                        |        |  |  |  |  |  |
|--|---|--|-----------------|-------------------------|------------------------|--------|--|--|--|--|--|
| JNº.   | I itle  |  | Pressmark       | University<br>bookstore | cabinet of the depart. |        |  |  |  |  |  |
| 9.   | Lenčiauskienė, Daiva. Sąnarių p<br>raumenų jėgą lavinamosios meto<br>knyga 2017   | aslankumą ir<br>odikos : metodinė                                  | 616.7<br>Le201  | 6                       | Yes                    |        |  |  |  |  |  |
| 10.  | Šakalienė, Rasa Išsėtinė sklerozė<br>studijų knyga 2014   | ir kineziterapija :  | 615.825<br>Ša38 | 8                       | Yes                    | 1      |  |  |  |  |  |
| 11.  | Klubo sąnario artrozė ir endoprotezavimas.<br>Kineziologija ir kineziterapija : mokomoji knyga,<br>2014616.7 Kl-<br>16812Yes  |  |                 |                         |                        |        |  |  |  |  |  |
| 12.  | Norkin, C. C., & White, D. J. (2016). Measurement<br>of joint motion: a guide to goniometry. FA Davis.No  |  |                 |                         |                        |        |  |  |  |  |  |
| Add  | itional literature  |  |                 |                         |                        |        |  |  |  |  |  |
| №.   | Title   |  |                 |                         |                        |        |  |  |  |  |  |
| 1.   | <ul> <li>Abu Bakar, Y. I., Hassan, A., Yusoff, M. S. B., Kasim, F., Abdul Manan@ Sulong, H., &amp; Hadie, S. N.</li> <li>H. (2022). A scoping review of effective teaching strategies in surface anatomy. Anatomical sciences education, 15(1), 166-177.</li> </ul> |  |                 |                         |                        |        |  |  |  |  |  |
| 2.   | Horler, C., Hebron, C., & Martyn, K. (2022). Personalizing education: The clinical reasoning processes of physiotherapists using education for the treatment of people with chronic low back pain. Physiotherapy Theory and Practice, 38(3), 412-421.               |  |                 |                         |                        |        |  |  |  |  |  |
| 3.   | Perner, S., & Danielsson, L. (2021). Exploring clinical reasoning in Austrian mental health physiotherapy: the physiotherapist's perspective. Physiotherapy Theory and Practice, 1-14.  |  |                 |                         |                        |        |  |  |  |  |  |
| 4.   | Abrandt Dahlgren, M., Valeskog, K., Johansson, K., & Edelbring, S. (2021). Understanding clinical reasoning: A phenomenographic study with entry-level physiotherapy students. Physiotherapy Theory and Practice, 1-10  |  |                 |                         |                        |        |  |  |  |  |  |
| 5.   | Molloy, E., Saunders, P., & Koo<br>Metrologia, 59(2), 025002.   | , A. (2022). Effects of  | of rotation er  | ors on gonic            | metric measure         | ments. |  |  |  |  |  |
| 6.   | Fan, J., Gu, F., Lv, L., Zhang, Z., Zhu, C., Qi, J., & Zhu, Q. (2022). Reliability of a human pose tracking algorithm for measuring upper limb joints: comparison with photography-based goniometry.<br>BMC Musculoskeletal Disorders. 23(1), 1-10                  |  |                 |                         |                        |        |  |  |  |  |  |
| 7.   | Uysal, Ö., Demirci, S., Kara, D., Yıldız, T. İ., Sevinç, C., Eraslan, L. S., & Düzgün, İ. (2022). Tender point examination with palpation in different shoulder pathologies: A retrospective study. Journal of Orthopaedic Science, 27(2), 366-371.                 |  |                 |                         |                        |        |  |  |  |  |  |
| 8.   | Davidson, M. J., Nielsen, P. M., Taberner, A. J., & Kruger, J. A. (2020). Is it time to rethink using digital palpation for assessment of muscle stiffness?. Neurourology and urodynamics. 39(1), 279-285.  |  |                 |                         |                        |        |  |  |  |  |  |
| 9.   | Oliveira, D. G., Oliveira, G. M., & Kirkwood, R. N. (2022). Clinimetric Properties of the Applied<br>Kinesiology Manual Muscle Test in Adults With and Without Pain: A Methodological Study. Journal of<br>Chiropractic Medicine                                    |  |                 |                         |                        |        |  |  |  |  |  |
| <ul> <li>Roman, N. A., Miclaus, R. S., Nicolau, C., &amp; Sechel, G. (2022). Customized Manual Muscle Testing for<br/>Post-Stroke Upper Extremity Assessment. Brain Sciences, 12(4), 457.</li> </ul> |   |  |                 |                         |                        |        |  |  |  |  |  |
| Coordinating lecturer  |   |  |                 |                         |                        |        |  |  |  |  |  |
|  | Position Degree, surname, name Schedu   |  |                 |                         |                        |        |  |  |  |  |  |
|  | Associate Professor   |  |                 |                         | 43                     |        |  |  |  |  |  |
| Subo   | livision  |  |                 |                         |                        |        |  |  |  |  |  |
|  |   | Entitlement  |                 | _                       |                        | Code   |  |  |  |  |  |
| l I  | Denartment of   | Health Promotion and   | nd Rehabilita   | tion                    |                        | 2006   |  |  |  |  |  |

| Department of Health Promotion and Rehabilitation |  |  |  |  |  |  |  |  |  |  |  |  |  |
|---|--|--|--|--|--|--|--|--|--|--|--|--|--|
|   |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Study module teaching form №. 1                   |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Semester Made of studies Structure                |  |  |  |  |  |  |  |  |  |  |  |  |  |

|                                  |       |           |                |           | Theory    | Semina    | ars         | urs Lab<br>Works |     | ab l<br>orks v |       | Ind.<br>work |   |          | Total<br>hours |    | Total<br>hours |       | Total<br>hours |       |  |  |  |
|----------------------------------|-------|-----------|----------------|-----------|-----------|-----------|-------------|------------------|-----|----------------|-------|--------------|---|----------|----------------|----|----------------|-------|----------------|-------|--|--|--|
| A S                              |       | D         |                |           | 15        | 4 2       |             | .6 85            |     | 35             | 130   |              |   |          | 5              |    |                |       |                |       |  |  |  |
| Languages of instruction:        |       |           |                |           |           |           |             |                  |     |                |       |              |   |          |                |    |                |       |                |       |  |  |  |
| Lithuanian 1                     | 1     | Engli     | sh E           | Russian R |           | Frend     | ch          | F                |     |                | Germa |              | mai                                     | n        | G              |    |                | Other |                | Oth.  |  |  |  |
| Plan of in-class                 | s hou | ırs       |                |           |           |           |             |                  |     |                |       |              |   |          |                |    |                |       |                |       |  |  |  |
| №. of Themes                     |       |           | Academic h     | ours      |           | Mo of T   | ha          | ma               | NG. | Academic ho    |       |              |   |          |                |    |                | ours  |                |       |  |  |  |
|                                  |       | Theory    | Seminars       | Lab       | Works     | JN≌. 01 1 | nemes       |                  |     | Theory         |       |              |   | Seminars |                |    | Lab Works      |       |                |       |  |  |  |
| 1.                               |       | 1         | 0              |           | 0         | 14.       |             |                  |     |                | 1     |              |   |          | 0              |    |                |       | 0              |       |  |  |  |
| 2.                               |       | 1         | 0              |           | 0         | 15        | 15.         |                  |     |                |       | 1            |   | 0        |                |    |                | 0     |                |       |  |  |  |
| 3.                               |       | 1         | 0              |           | 0 16      |           |             |                  |     |                | 0     |              |   | 0        |                |    |                | 2     |                |       |  |  |  |
| 4.                               |       | 1         | 0              |           | 0         | 17.       |             |                  |     |                | 0     |              |   |          | 0              |    |                |       | 2              |       |  |  |  |
| 5.                               |       | 1         | 0              |           | 0         | 18        | 3.          |                  |     |                | 0     |              |   |          | 0              |    |                | 2     |                |       |  |  |  |
| 6.                               |       | 1         | 0              |           | 0         | 19.       |             |                  |     |                | (     | )            |   |          | 0              |    |                | 2     |                |       |  |  |  |
| 7.                               |       | 1         | 0              |           | 0         | 20        | ).          |                  |     |                | (     | )            |   |          | 1              |    |                | 1     |                |       |  |  |  |
| 8.                               |       | 1         | 0              |           | 0         | 21        |             |                  |     |                | 0     |              |   | 0        |                |    |                | 1     |                |       |  |  |  |
| 9.                               |       | 1         | 0              | 0         |           | 22.       |             |                  |     | 0              |       |              | 0                                       |          |                |    | 2              |       |                |       |  |  |  |
| 10.                              |       | 1         | 0              |           | 0         | 23.       |             |                  | 0   |                |       | 1            |   |          |                | 1  |                |       |                |       |  |  |  |
| 11.                              |       | 1         | 0              | 0         |           | 24.       |             | 0                |     |                | 0     |              |   |          | 5              |    |                |       |                |       |  |  |  |
| 12.                              |       | 1         | 0              |           | 0         | 25.       |             |                  | 0   |                |       |              | 1                                       |          |                |    | 4              |       |                |       |  |  |  |
| 13.                              |       | 1         | 0              |           | 0         | 26        | 6.          |                  |     | 0              |       |              |   | 1        |                |    |                | 4     |                |       |  |  |  |
|                                  |       |           |                |           |           | Total:    |             |                  |     |                | 15    |              |   | 4        |                |    | 26             |       | 5              |       |  |  |  |
| Schedule of in                   | livid | lual worl | c tasks and th | heir inf  | luence on | final gra | ıde         |                  |     |                |       |              |   |          |                |    |                |       |                |       |  |  |  |
|                                  |       |           | No of          | Total     | Influen   | ce on     | e on Week o |                  |     |                |       |              | f presentment of task (*) and reporting |          |                |    |                |       |                |       |  |  |  |
|                                  |       |           | syllabus       |           | grade     | e %       |             | <del></del>      |     |                |       | (0)          |   |          | -              | 1  |                |       |                |       |  |  |  |
|                                  |       |           | syntaotas      | nours     | gruue     | , /0      | 12          | 23               | 4   | 56             | 78    | 39           | 10                                      | 11       | 12             | 13 | 14             | 15    | 16             | 17-20 |  |  |  |
| Accounting for sessions          | prac  | tice      | 16-20          | 13        | 15        |           |             | *                | 0   |                |       |              |   |          |                |    |                |       |                |       |  |  |  |
| Accounting for practice sessions |       | tice      | 21-23          | 13        | 15        |           |             |                  | *   | 0              |       |              |   |          |                |    |                |       |                |       |  |  |  |
| Accounting for practice sessions |       | tice      | 24-25          | 13        | 15        |           |             |                  |     |                | *(    | )            |   |          |                |    |                |       |                |       |  |  |  |
| Accounting for practice sessions |       | tice      | 26             | 13        | 15        |           |             |                  |     |                |       | *            | 0                                       |          |                |    |                |       |                |       |  |  |  |
| Exam                             |       |           | 1-26           | 33        | 40        |           |             |                  |     |                |       |              |   |          |                |    |                |       | *              | 0     |  |  |  |
|                                  |       | Total:    | -              | 85        | 10        | )         |             |                  |     |                |       |              |   |          |                |    |                |       |                |       |  |  |  |