

**SYLLABUS OF THE EDUCATIONAL COMPONENT  
PHYSIOTHERAPY, BALNEOLOGY AND REHABILITATION**Speciality: **221 Dentistry**Educational and professional program: **Dentistry**Component code in the educational program: **EC 45**Higher education level: **Second (Master's) Degree**Form of education: **Full-time**Year of study: **4**Semester(s): **VII (Autumn) or VIII (Spring)**Type of educational component: **Elective**Academic year: **2027-2028**Volume: **3 credits ECTS (90 hours)**Training sessions: **lectures, practical classes,  
independent study, consultations**Final control: **Credit**

(exam/diff. credit/credit)

Prerequisites: **MC4, MC7, MC18, MC19,  
MC28.**

Department/Unit: **Department of Sports, Physical and Rehabilitation Medicine, Physical Therapy, and Occupational Therapy**, 4 O. Shpeiera St., Educational and Research Medical Center "University Clinic" of Kharkiv National Medical University, 2nd floor, right side, Kharkiv.

Head of the educational component: **Associate Professor Serhii Latohuz**[si.latoguz@knmu.edu.ua](mailto:si.latoguz@knmu.edu.ua)

Page of the educational component in the Distance Learning System of KhNMU (Moodle):  
<https://distance.knmu.edu.ua/course/view.php?id=5747>

**DESCRIPTION OF THE EDUCATIONAL COMPONENT**

*Physiotherapy, Balneology and Rehabilitation as an elective educational component covers modern methods of restorative treatment and prevention used in dental practice. The course examines physiotherapeutic procedures applied in the management of inflammatory processes, pain syndromes, and functional disorders of the maxillofacial region, as well as balneological resources for improving overall patient health.*

*Special attention is paid to rehabilitation measures following dental interventions, orthodontic treatment, and maxillofacial trauma, which contribute to reducing recovery time and improving treatment outcomes.*

**PURPOSE OF THE COURSE:** To provide students with knowledge and understanding of the application of physiotherapeutic methods, natural therapeutic resources, and rehabilitation measures in dental practice in order to improve treatment effectiveness, prevent complications, and restore the functional condition of the maxillofacial region.

**LEARNING OUTCOMES:** Upon successful completion of the course, the student will be able to justify the selection of contemporary physiotherapeutic methods and balneological technologies based on evidence-based practice; assess the safety and effectiveness of their application in patients with various pathological conditions; develop individualized rehabilitation plans according to the patient's clinical status and the principles of the International Classification of Functioning, Disability and Health (ICF); ensure interprofessional collaboration and outcome monitoring; and implement modern treatment and rehabilitation protocols in accordance with current standards and quality indicators.

**CONTENT OF THE EDUCATIONAL COMPONENT****List of lecture topics (2 hours):**

1. Introduction to the course. Fundamentals of physiotherapy, balneology and rehabilitation in dentistry. The role of physical methods in the comprehensive treatment of dental diseases. The concept of rehabilitation: stages, goals, and principles of dental rehabilitation. The place of physiotherapy and rehabilitation in modern dental care.

**List of topics of practical / laboratory classes / seminars ( 28 hours):**

1. Introduction to the course. Fundamentals of physiotherapy, balneology and rehabilitation in dentistry. The role of physical methods in the comprehensive treatment of dental diseases. The concept of rehabilitation: stages, goals, and principles of dental rehabilitation. The place of physiotherapy and rehabilitation in modern dental care.
2. Electrotherapy and light therapy in dentistry. Mechanisms of action of electric current and light radiation. Diadynamic therapy, UHF therapy, laser therapy, infrared radiation: indications, techniques, and features of application.
3. Magnetotherapy, ultrasound therapy and modern hardware techniques. Application of magnetic fields, ultrasound, and high-frequency oscillations in dentistry. Combined physiotherapy methods in dental practice.
4. Balneology as part of the rehabilitation process in dentistry. Indications for spa treatment. Natural therapeutic factors: mineral waters, therapeutic mud, climatotherapy. Comprehensive spa therapy for patients with chronic dental pathology.
5. Physical rehabilitation in functional disorders of the maxillofacial region. The role of therapeutic exercises, massage and kinesitherapy. Restoration of chewing, speech and swallowing functions. Practical examples of rehabilitation programs for dental patients.
6. Rehabilitation of patients in postoperative and post-traumatic periods. Basics of postoperative rehabilitation following surgical interventions. Recovery after dental implantation, fractures and resections. The role of physiotherapy in accelerating tissue regeneration and reducing complications.
7. Safety regulations in physiotherapy rooms. Emergency care. Final credit assessment.

**List of topics of independent work of the student (60 hours)**

1. Introduction to the course. Fundamentals of physiotherapy, balneology and rehabilitation in dentistry.
2. Electrotherapy and light therapy in dentistry.
3. Magnetotherapy, ultrasound therapy and modern hardware techniques.
4. Balneology as part of the rehabilitation process in dentistry.
5. Physical rehabilitation in functional disorders of the maxillofacial region.
6. Rehabilitation in postoperative and post-traumatic conditions.
7. Safety procedures in physiotherapy rooms and emergency care. Preparation for the final credit assessment.

The IWS is aimed at deepening and consolidating the theoretical knowledge gained during classroom training and contributing to the formation of professional competencies. The results of the IWS are subject to control and are included in the final control of knowledge.

**Consultations:** *offline/online, according to the schedule of the department or by pre-registration, indicating the method of registration.*

**Teaching methods:** *practical exercises and tasks, case studies and situational problem solving, analysis of clinical cases*

**EVALUATION**

**Current Learning Activities (CLA).** Assessment of students' academic performance is carried out in accordance with the Instruction on the Evaluation of Educational Activities of Higher Education Students at Kharkiv National Medical University ([https://knmu.edu.ua/doc\\_block\\_type/instrukczyi-navchalnogo-proczesu/](https://knmu.edu.ua/doc_block_type/instrukczyi-navchalnogo-proczesu/)).

Grades for practical or final classes range from 2 to 5 points. Late submission of assignments without valid reasons results in grade reduction proportional to the delay period. Assignments are reviewed within 24 hours. Grades are recorded in the electronic journal. Unsatisfactory grades must be retaken

in accordance with the Regulation on the Procedure for Making Up Missed Classes by Students of KhNMU ([https://knmu.edu.ua/wp-content/uploads/2021/05/pol\\_por-vidprac-zaniat.pdf](https://knmu.edu.ua/wp-content/uploads/2021/05/pol_por-vidprac-zaniat.pdf)).

At the end of the semester, the average semester grade is converted into a multi-point scale (70–120 points) according to Table 2 of the Evaluation Instruction. The arithmetic mean of CAP constitutes the General Academic Performance (GAP).

**Individual tasks (IT)** Individual student assignments are not mandatory but may be completed upon the student's initiative. They are evaluated in ECTS points (maximum 10), which are added to the total points earned for current academic performance. The department has approved a list of individual tasks (conference presentations, participation in *профіль* competitions/olympiads, preparation of analytical reviews with presentations and plagiarism check) with defined bonus points (maximum 10).

**Final control.** Credit (C)

**Grade in subject (GS).**  $GS=CLA+IT+C$

**Appealing the results of the final control** is carried out in accordance with the procedure established in KhNMU ([https://knmu.edu.ua/wp-content/uploads/2021/05/polog\\_apel\\_kontrol.pdf](https://knmu.edu.ua/wp-content/uploads/2021/05/polog_apel_kontrol.pdf)).

### **POLICIES OF THE EDUCATIONAL COMPONENT**

**Recommendations for working on the course:** actively engage in all classroom activities; dedicate 1–2 hours daily to independent study and preparation; ask questions during classes; attend consultations; submit assignments on time; complete all forms of assessment.

**Attending classes.** Attendance of practical classes is mandatory. A white medical coat is required for offline classes. Arrival more than 5 minutes late may result in denial of admission to the class. Missed classes must be made up in accordance with university regulations.

**Academic integrity.** KhNMU stands on the positions of zero tolerance to manifestations of academic dishonesty. Any violations of the principles of academic integrity entail responsibility in accordance with the procedure established by KhNMU ([https://knmu.edu.ua/wp-content/uploads/2021/05/polog\\_ad-1.pdf](https://knmu.edu.ua/wp-content/uploads/2021/05/polog_ad-1.pdf)).

**Use of electronic gadgets and artificial intelligence tools.** Use of electronic gadgets and artificial intelligence tools is permitted only with the instructor's approval.

**Policy on persons with special educational needs.** Students with special educational needs must contact the instructor to develop an individualized educational trajectory.

**Teacher Response Time:** 24 hours.

#### **Technical requirements for the course:**

- access to a computer, laptop, tablet or smartphone
- Corporate Google account with your own photo
- skills in working with Google Workspace (Google Meet, Docs, Sheets, Slides, Forms) and Moodle
- *other requirements of the department*

**Technical support:** ASM (ev.shevtsov@knmu.edu.ua), Google (tehotdelknmu@gmail.com), Moodle (al.korol@knmu.edu.ua)

### **RECOMMENDED SOURCES**

1. Kisner C., Colby L. A., Borstad J. *Therapeutic Exercise: Foundations and Techniques*. 8th ed. Philadelphia: F.A. Davis, 2022. 864 p.
2. Cameron M. H. *Physical Agents in Rehabilitation: An Evidence-Based Approach to Practice*. 6th ed. St. Louis: Elsevier, 2022. 512 p.
3. Bezkor E. W., O'Sullivan S. B., Schmitz T. J. *Improving Functional Outcomes in Physical Rehabilitation*. 3rd ed. Philadelphia: F.A. Davis, 2021. 480 p.
4. Shumway-Cook A., Woollacott M. H., Rachwani J., Santamaria V. *Motor Control: Translating Research into Clinical Practice*. 6th ed. Philadelphia: Wolters Kluwer, 2022. 736 p.

5. Palisano R., Orlin M., Schreiber J. Campbell's Physical Therapy for Children. 6th ed. St. Louis: Elsevier, 2022. 1056 p.
6. Effgen S. K., LaForme Fiss A. Meeting the Physical Therapy Needs of Children. 3rd ed. Philadelphia: F.A. Davis, 2020. 704 p.
7. Chui K. K., Fulk G. D. O'Sullivan & Schmitz's Physical Rehabilitation. 8th ed. Philadelphia: F.A. Davis, 2024. 1500 p.
8. Cooper R. A., Ohnabe H., Cooper R. An Introduction to Rehabilitation Engineering. Boca Raton: CRC Press, 2025.

Head of the Department of Sports,  
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