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## OUTLINE OF CHEST PHYSIOTHERAPY MODULE

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**Semester: 2<sup>nd</sup>**

**Credits - ECTS: 8**

**Module Code: MF15**

**HOURS: 2 Theory/1 Exercise practice**

**Type: Mandatory Module**

**The aim of the course** is to train and initiate postgraduate students in the up-to-date and specialized knowledge in the field of chest physiotherapy assessment, prevention and treatment of chronic diseases and acute respiratory events of children and adults, applied at research and clinical level, based on clinical evaluation and clinical reasoning.

*After the successful completion of the course, the postgraduate students:*

- They will have understood the physiology of the effect mechanisms of chest physiotherapy interventions
- They will acquire the ability to evaluate and synthesize the knowledge provided by specialized research in chest physiotherapy
- They will develop the ability to theoretically approach research problems, formulate assumptions, design, and conduct research, analyze, interpret, present, and publish data
- They will be able to contribute to the promotion and improvement of health, functional capacity, and quality of life through the ability to conduct research in the cognitive field of chest physiotherapy
- They will be able to participate in the design, organization, and management of social care programs and in the formulation of policies for European, national, and regional health services.

**Course content:** *The following thematic modules will be taught:*

1. Physiology of the respiratory pump - Respiratory Physiotherapy and Acid-base Balance
2. Dysfunctional breathing – measurement – assessment – evidence-based interventions
3. Up-to-date approaches to measurements and evaluation in respiratory diseases, research tools, validation, and reliability testing.
4. Mobilization and relaxation techniques in patients with respiratory diseases
5. Asthma: Evidence-based approach with breathing exercises and pulmonary rehabilitation in children and adults
6. COPD: Evidence-based approach with breathing exercises and pulmonary rehabilitation in stable COPD and in exacerbation - Smoking cessation
7. Cystic fibrosis: Evidence-based approach with breathing exercises and pulmonary rehabilitation in children and adults
8. Pulmonary Rehabilitation in Patients with Pulmonary Hypertension, Bronchiectasis, and Interstitial Diseases
9. Neurological diseases: Evidence-based approach with breathing exercises
10. Physiotherapy in post-ICU syndrome
11. Measurements and Assessment of Fitness in chronic respiratory patients and severely ill patients
12. Modern assistive technology in respiratory diseases – Home-based tele-rehabilitation
13. Palliative care and respiratory physiotherapy

**Teaching methods and means:** 13 weeks x 2 hours theory & 1-hour exercise practice

The exercise of an act concerns incident analysis and demonstration of specialized breathing exercises.

**Methods of evaluation:** The evaluation of students will be carried out in accordance with the regulation of the Post Graduate Program and the relevant decisions of the assembly of the department of Physiotherapy, as a weighting of their grade in mid-evaluation (20%), in the essays (30%) and the final examination (50%) of the course.

**Indicative bibliography:**

- Γραμματοπούλου Ε. Φυσικοθεραπευτικές Τεχνικές και Μέθοδοι Αξιολόγησης στις Αναπνευστικές Παθήσεις. Αθήνα: Εκδόσεις Ι. Κωνσταντάρας, 2017.
- Γραμματοπούλου Ε. Κατευθυντήριες Οδηγίες για τα Προγράμματα Πνευμονικής Αποκατάστασης. Αθήνα: Εκδόσεις Πεδίο, 2015. Επιμέλεια του: AACVPR. Guidelines for pulmonary rehabilitation programs.
- Global Initiative for Asthma – GINA. Global strategy for asthma management and prevention, updated 2019. Retrieved from <http://www.ginasthma.org>.
- Gkaraveli M, Skordilis M, Grammatopoulou E, et al. The Effect of Inspiratory Muscle Training on Respiratory Pressure, Pulmonary Function and Walking Ability in Preschool Children with Cerebral Palsy. *Annals of Physiotherapy Clinics*, 2019; 2(1)
- Troosters T, Tabin N, Langer D, et al. Introduction of the harmonized respiratory physiotherapy curriculum. *Breathe*. 2019; 15:110-115.
- Global Initiative for Chronic Obstructive Lung Disease – GOLD. Global strategy for COPD management and prevention, updated 2019. Retrieved from <http://www.gold.org>.
- Boden I, Skinner E, Browning L, et al. Preoperative physiotherapy for the prevention of respiratory complications after upper abdominal surgery: pragmatic, double blinded, multicentered randomized controlled trial. *BMJ*. 2018; 360:j5916.
- Grigoriadis K, Tsangaris I, Koutsoukou A, et al. The respiratory effect of tracheal gas insufflation (TGI) on tracheostomized spontaneously breathing ICU patients. *Journal of critical care*, 2018;48:160-165.
- Menezes K, Nascimento L, Avelino P, et al. Efficacy of Interventions to Improve Respiratory Function After Stroke. *Respiratory Care*. 2018; 63(7): 920-933.
- Meuret A, Ritz T, Wilhelm F, et al. Hypoventilation Therapy Alleviates Panic by Repeated Induction of Dyspnea Alicia E. *Biological Psychiatry: Cognitive Neuroscience and Neuroimaging*. 2018; 3:539–545.
- Grammatopoulou E, Skordilis E, Haniotou A, et al. The effect of a holistic self-management plan on asthma control. *Physiotherapy Theory and Practice*. 2017; 33:622-633.
- Belimpasaki V, Grammatopoulou E, Philippou A, et al. The implementation of Global asthma management guidelines in two general respiratory outpatient Clinics in Greece. *Hospital Chronicles*. 2017; 11(3):153–161.
- Grammatopoulou E, Charmpas T, Strati E, et al. The scope of physiotherapy services provided in public ICUs in Athens, Greece. *Physiotherapy Theory and Practice*. 2017; 33: 1-9.
- Kaltsakas G, Anastasopoulos A, Chynkiamis N, et al. Effect of high intensity interval exercise rehabilitation in cystic fibrosis. *European Respiratory Journal* 2017 50: OA310; DOI: 10.1183/1393003.congress-2017. OA310.

- Macêdo TM, Freitas DA, Chaves GS, et al. Breathing exercises for children with asthma. *Cochrane Database Syst Rev.* 2016 Apr 12;4:CD011017. doi: 10.1002/14651858.CD011017.pub2.
- Rietberg MB, Veerbeek JM, Gosselink R, et al. Respiratory muscle training for multiple sclerosis. *Cochrane Database of Systematic Reviews* 2017, Issue 12. Art. No.: CD009424. DOI: 10.1002/14651858.CD009424.pub2.
- Radtke T, Nevitt SJ, Hebestreit H, et al. Physical exercise training for cystic fibrosis. *Cochrane Database of Systematic Reviews* 2017, Issue 11. Art. No.: CD002768. DOI: 10.1002/14651858.CD002768.pub4.
- Grammatopoulou E, Skordilis E, Georgoudis G, et al. Hyperventilation in asthma: A validation study of the Nijmegen Questionnaire - NQ. *Journal of Asthma.* 2014; 29:1-8.
- Grammatopoulou E, Nikolovgenis N, Skordilis E, et al. Validity and reliability of general self-efficacy scale in asthma patients. *European Respiratory Journal.* 44, 2014; (S58): 4314.
- Westerdahl E, Wittrin A, Kånåhols M, et al. Breathing exercises for patients with multiple sclerosis - A randomized controlled trial. *European Respiratory Journal* 2014; 44: 4676.
- Stiller K. *Chest.* Physiotherapy in intensive care: an updated systematic review. 2013; 144(3): 825-847.
- Christakou A, Papadopoulos M, Patsaki I, et al. Functional Assessment Scales in a General Intensive Care Unit. A Review. *Hospital Chronicles.* 2013, 8(4): 164–170.
- Grammatopoulou E, Skordilis E, Evangelodimou A, et al. Validity and reliability evidence of the Nijmegen questionnaire in asthma. *European Respiratory Journal.* 2013; 42 (S57): 1307.
- Patsaki I, Papadopoulos M, Sidiras G, et al. The Effectiveness of Inspiratory Muscle Training in Weaning Critically Ill Patients from Mechanical Ventilation. *Hospital Chronicles.* 2013, 8(2): 86–90.
- Pollock RD, Rafferty GF, Moxham J, et al. Respiratory muscle strength and training in stroke and neurology: a systematic review. *Int J Stroke.* 2013;8( 2): 124-30.
- Grammatopoulou E, Skordilis E, Evangelodimou A, et al. Adequate physical activity in students with and without asthma. *European Respiratory Journal.* 2012; 40(S56):144.
- Grammatopoulou E, Stavrou N, Myrianthefs P, et al. Asthma control in Greece: Validity and reliability evidence of the Asthma Control Test-ACT in Greece. *Journal of Asthma.* 2011; 48:57-64.
- Grammatopoulou E, Haniotou A, Evangelodimou A, et al. Factors associated with asthma control in patients with stable asthma. *European Respiratory Journal.* 2011; 38 (S55): 1297.
- Grammatopoulou E, Skordilis E, Stavrou N, et al. The effect of physiotherapy-based breathing retraining on asthma control. *Journal of Asthma.* 2011; 48:593-601.
- Grammatopoulou E, Belimpasaki V, Valalas A, et al. Active Cycle of Breathing Techniques-ACBT contributes to pain reduction in patients with rib fractures. *Hellenic Journal of Surgery.* 2010; 82, 42-47.
- Grammatopoulou E, Haniotou A, Douka G, et al. Factors associated with BMI in Greek adults with asthma. *Journal of Asthma.* 2010; 47, 276-280.