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**ÖMER HALİSDEMİR UNIVERSITY FACULTY OF MEDICINE**

**SECOND YEAR PHASE-II**

**RESPIRATORY SYSTEM PHASE**

**AIM**

At the end of the "Respiratory System” phase, second year students will learn the anatomical, histological, embryological, physiological and biochemical characteristics of the respiratory system that will form a basis for the future clinical courses and learn the basic information about the microbial agents and parasites that settle in the respiratory system.

**INTENDED LEARNING OUTCOMES:**

At the end of this phase, second year students will be able to:

1. Describe the anatomy of the respiratory tract (nose, larynx, trachea and bronchi), lungs, mediastinum, pleura and thorax and the anatomical terminology of these structures,

2. Identify and name the anatomical structures on cadavers and models,

3. Describe the respiratory epithelium, its cellular composition, their cytological properties and functions,

4. Recognize histological features of nose, larynx and trachea and show them under the microscope,

5. Explain the parts of the bronchial tree, the histological properties of the bronchi and bronchioles, as well as the functions of their cells,

6. Describe the alveolar cells, the structure and function of the pulmonary surfactant,

7. Describe the structure and elements of the blood-air barrier,

8. Interpret the differentiation of the respiratory system and the development of the nose, larynx, trachea, bronchi and bronchioles,

9. Understand the importance of developmental anomalies of respiratory tract,

10. Describe the processes that occur during breathing and the mechanisms that control them,

11. Evaluate pulmonary function tests,

12. Interpret gas exchange, ventilation-perfusion processes,

13. Understand the importance of physiopathological changes that may occur in the respiratory system,

14. Collect samples for blood gas analysis correctly and interpret the blood gas analysis report,

15. Explain the principle of the blood gas device while its working,

16. Prepare bacterial media,

17. Evaluate throat cultures, colony morphology and gram-staining results,

18. Identify Staphylococcus, streptococcus, pneumococcus and N. meningitidis, N. gonorrhoeae, M. catharralis, Legionella, corynebacterium, haemophilus bacteria, Francisella, Pastorella, Bordetella, Actinomycet and nocardia by gram-staining,

19. Identify mycoplasma and L-form bacteria in culture,

20. Identify mycobacteria by acid-fast staining,

21. Describe the viral structure, subtypes and epidemiological character of orthomyxoviruses, paramyxoviruses and adenoviruses,

22. Classify parasites and describe the epidemiology of parasitic diseases,

23. Identify the different life stages of ameba, Trichomonas sp., Pneumocystis carinii, Giardia intestinalis, Coccidias, Leishmanias, Trypanosomias, Plasmodiums and Toxoplasma gondii by examining their microscopic images,

24. Apply principles for working with biological material, provide decontamination, disinfection, sterilization and antisepsis,

25. Fill the request form for the laboratory examination, draw the laboratory sample under appropriate conditions and delivered it to the laboratory,

26. Use a microscope,

27. Prepare vaginal discharge samples (urogenital infection screening and fresh sample preparation) and evaluate them,

28. Prepare peripheral spreads for parasite search and evaluate them.