**Theoretical and practical course plan form**

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| Introduction to Respiratory Physiology Lesson (Theoretical and Practical) |
| College | medical School |
| educational group | Physiology Department |
| Teacher name | Lecturer Dr. Enayat Anvari |
| Course and degree | Medical doctoral  |
| Day and time of the lesson |  |
| Lesson Place | Venue of Ilam University of Medical Sciences, School of Medicine |
| Number and type of unit | Number and type of unit 0.59 |
| prerequisite courses | No prerequisite courses |
| Office address | Address: Ilam University of Medical Sciences, School of Medicine, Department of Physiology |
| Email |  anvari\_ph@yahoo.com |
| lecturer phone | Teacher phone 09361050933 |

**General purpose:**

Students understanding the different physiological mechanism and different structures and components of the respiratory system and express the function of each of those components in

**Specific objectives: Students can after the course**

1- Know the structure of the respiratory system and its different parts and know the respiratory cycle and the mechanism of inhaling and exhaling.

Express alveolar and pleural pressure changes during inhalation and exhalation.

3- Explain the concept of lung compliance, surfactant and its role in pulmonary preparation.

4- Know lung function tests, lung volumes and capacities.

5-Explain how gas is exchanged in the lungs and the law of diffusion, and how oxygen and carbon dioxide are transported in the blood

6. Name the respiratory control centers and explain their role in regulating respiration.

7- Can describe the types of pulmonary disorders (asthma, fibrosis and emphysema) along with the disrupted mechanisms in that disease.

**Table of contents and order of lesson presentation**

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| week | title | lecturer |
| First session | Generalities of the respiratory system, its structure and basic definitions of the respiratory system | Dr.anweri |
| Second session | The concept of lung compliance, surfactant and its role, lung function tests, lung volumes and capacities |  |
| Third session | Respiratory cycle and mechanism of inhalation and exhalation Gas exchange and their transfer in the blood, changes in alveolar and pleural pressure during inhalation and exhalation, pulmonary ventilation |  |
| Forth session | How gas is exchanged in the lungs and the law of diffusion and ways of transporting oxygen and carbon dioxide in the blood, the laws related to gases, various lung disorders (asthma, fibrosis and emphysema) along with the disrupted mechanisms in those diseases |  |
| Fifth session | Respiratory control neural centers and their role |  |
| Sixth session | Spirometer, Respiratory Maneuvers, and Diagnosis and Interpretation of Pulmonary Disorders (Practical Topic) |  |
| Seventh session | Continued interpretation of spirogram, lung structure and respiratory system in laboratory animal (practical topic) |  |

**Teaching methods: lectures, questions and answers**

Student duties and homework:

1- Regular and active attendance at meetings

2- Studying the presented topics and active participation in class quizzes

3- Observing etiquette and ethics in the classroom and avoiding inappropriate behaviors

**Student evaluation method:**

1- Participation and active presence in the class

2- Class quizzes

3- Mid-term and end-of-semester exam

**Study sources:**

1- Text book of medical physiology. Guyton & Hall. 12the edition, 2019.

2- Text book of medical physiology Ganong. 2006.

3- Text book of physiology. Berne and levy. 2009.