

AIM(S) of the PHASE-2 COMMITTEE-2

1.	In this committee, it is aimed that students be able to evaluate the embryological development processes, anomalies, anatomical, histological, physiological and biochemical features of the circulatory and respiratory systems by associating them with the laws of biophysics.
2.	In this committee, it is aimed that the students comprehend the problem-based approach to the cases.
3.	In this committee, it is aimed that the students be able to comprehend the principles of basic immunology and the basic media and dyes used in medical bacteriology.
4.	In this committee, it is aimed that students comprehend case analysis with Problem based learning methods.

OBJECTIVE(S) of the PHASE-2 COMMITTEE-2

1.	To be able to theoretically define the anatomical details of the structures that make up the circulatory and respiratory systems such as the nose, larynx, trachea, lungs, heart, arterial, venous, and lymphatic vessels and nodes and the thoracic wall, and to be able to show these structures on cadavers and models.
2.	To be able to count the histological layers of the structures that make up the circulatory and respiratory systems, to be able to distinguish the types of vessels and to be able to recognize them microscopically.
3.	To be able to define the embryological developmental stages of the structures that make up the circulatory and respiratory systems, and the features and anomalies of the fetal circulation.
4.	To be able to explain the structures that play a role in the development of the head and neck, which structures are formed from these structures and their development times.
5.	To be able to explain the electrophysiological properties of the heart muscle and its relationship with the pump function of the heart, the flow-pressure-resistance relationship in the circulatory system, the cooperation of the heart and vascular system in providing appropriate tissue perfusion, the pressure-current relationship in the vascular system and the control mechanisms of microcirculation.
6.	To be able to count the neurogenic and hormonal mechanisms that function in the regulation of blood pressure, to be able to recognize heart sounds, to be able to interpret blood pressure changes, to be able to calculate heart rate on ECG, to be able to evaluate heart rhythm and to be able to perform vector analysis.
7.	To be able to interpret the changes in current-resistance relations and partial gas pressures during the passage of air through these routes during exhalation.
8.	To be able to comprehend and evaluate the factors regulating ventilation mechanics (pulmonary elastic properties, intrathoracic negative pressure) and the meaning of pulmonary function tests.
9.	To be able to explain the dynamics of pulmonary circulation and blood flow and to be able to interpret the relationship with gas exchange in the lung.
10.	To be able to describe the dynamics of oxygen and carbon dioxide exchange between atmosphere and blood, blood and cell, the transport of these gases and the

	biochemical reactions in this process.
11.	To be able to describe the centers in the brain stem regulating respiratory activity, their functioning, and the structures and functions of peripheral and central chemoreceptors that carry data to these centers.
12.	To be able to explain the physical basis of ECG, the efficiency and strength of the heart, surface tension, surfactant and alveolar mechanics.
13.	To be able to describe the biochemical structure of blood and to be able to explain the biochemical mechanisms in erythrocytes, to be able to describe the biochemical structures and mechanisms of coagulation proteins.
14.	To be able to describe both biosynthesis and degradation metabolism and to be able to explain porphyries.
15.	To be able to explain the importance of iron, its functions, metabolism in the body, iron-related proteins and diseases.
16.	To be able to describe the biochemical mechanisms of the respiratory system.
17.	To be able to comprehend and interpret the members of natural, cellular and humoral immunity in humans, their stages and the interaction between each other, to be able to recognize and use the basic media and dyes used in medical bacteriology.

INTENDED LEARNING OUTCOME(S) PHASE-2 COMMITTEE-2

1.	Can theoretically define the anatomical details of the structures that make up the circulatory and respiratory systems such as the nose, larynx, trachea, lungs, heart, arterial, venous, and lymphatic vessels and nodes and the thoracic wall, and can show these structures on cadavers and models.
2.	Can count the histological layers of the structures that make up the circulatory and respiratory systems, can distinguish the types of vessels and can recognize them microscopically.
3.	Can define the embryological developmental stages of the structures that make up the circulatory and respiratory systems, and the features and anomalies of the fetal circulation.
4.	Can explain the structures that play a role in the development of the head and neck, which structures are formed from these structures and their development times.
5.	Can explain the electrophysiological properties of the heart muscle and its relationship with the pump function of the heart, the flow-pressure-resistance relationship in the circulatory system, the cooperation of the heart and vascular system in providing appropriate tissue perfusion, the pressure-current relationship in the vascular system and the control mechanisms of microcirculation.
6.	Can count the neurogenic and hormonal mechanisms that function in the regulation of blood pressure, can recognize heart sounds, can interpret blood pressure changes, can calculate heart rate on ECG, can evaluate heart rhythm and can perform vector analysis.
7.	Can interpret the changes in current-resistance relations and partial gas pressures during the passage of air through these routes during exhalation.
8.	Can comprehend and evaluate the factors regulating ventilation mechanics (pulmonary elastic properties, intrathoracic negative pressure) and the meaning of pulmonary function tests.
9.	Can explain the dynamics of pulmonary circulation and blood flow and can interpret the relationship with gas exchange in the lung.
10.	Can describe the dynamics of oxygen and carbon dioxide exchange between

	atmosphere and blood, blood and cell, the transport of these gases and the biochemical reactions in this process.
11.	Can describe the centers in the brain stem regulating respiratory activity, their functioning, and the structures and functions of peripheral and central chemoreceptors that carry data to these centers.
12.	Can explain the physical basis of ECG, the efficiency and strength of the heart, surface tension, surfactant, and alveolar mechanics.
13.	Can describe the biochemical structure of blood and can explain the biochemical mechanisms in erythrocytes, can describe the biochemical structures and mechanisms of coagulation proteins.
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15.	Can explain the importance of iron, its functions, metabolism in the body, iron-related proteins and diseases.
16.	Can describe the biochemical mechanisms of the respiratory system.
17.	Can comprehend and interpret the members of natural, cellular and humoral immunity in humans, their stages and the interaction between each other, can recognize and use the basic media and dyes used in medical bacteriology.