

International School of Medicine / Medicine (English)

2023 - 2024 Academic Year

Cardiovascular & Respiratory System

Syllabus

Course Description					
Name	Code	Semester	T+A Hour	Credit	ECTS
Cardiovascular & Respiratory System	08. Committee	Fall Semester	108+38	0	10
Prerequisites Courses					
Recommended Elective Courses					
Language of Instruction	English				
Course Level	First Cycle (Bachelor's Degree)				
Course Type	Committee				
Course Coordinator	Assist.Prof. Kıvanç KÖK				
Name of Lecturer(s)	Assist.Prof. Kıvanç KÖK				
Assistant(s)					
Aim	The aim of this committee is to provide information to the physician candidates about the structure, development, function and dysfunctions of the cardiovascular and respiratory systems.				
Course Content	This course contains; BİOPHYSİCS : structure and functions of heart muscle cells, methods for functional analysis (EEG, MRI, PET etc), PHYSİOPATHOLOGY : arrhythmias, heart failure, heart valve disease, coronary artery disease, atherosclerosis, pericardial disease, hypertension etc, case discussion, HİSTOLOGY AND EMBRYOLOGY : circulatory system development, blood cells, hematopoeisis, lymphoid system, MEDICAL MİCROBİOLOGY : innate and adaptive immune systems, T and B cell development and functions, immune tolerance and autoimmunity, organ transplantation, cancer immunology and immune deficiencies, ANATOMY : cardiovascular system introduction, pericardium, heart, clinic, fetal circulation, arcus aortae, aorta thoracica, mediastinum, PHYSİOLOGY : blood and circulatory system physiology, BİOCHEMİSTRY : blood glucose, biochemistry of anemias in different conditions.				
Course Learning Outcomes				Teaching Methods	Assessment Methods
Explain the histological features of the circulatory system.					
Defines the heart wall, atrium, ventricle and heart valves.					
Counts the layers of the heart and explains their properties.					
Explain the histology of heart valves.					
Defines the histology of arteries and veins and explains the difference between them.					
Defines the characteristics of capillary types and their locations.					
Explain the histology of the lymphatic system.					
Evaluates clinical conditions related to vessels.					
Interprets the preparations and images related to the circulatory system.					
It explains when and where the heart begins to develop.					
Explain the early development of the heart and blood vessels.					
Explains the stages of heart development in detail.					
Explains the division of the primitive heart.					
Explain the development of heart valves.					
Count and define congenital anomalies of the heart and great vessels.					
Explain the development of vessels (angiogenesis) and vessel development in adults.					
Explain the development of the lymphatic system.					
Interprets clinical problems.					
Counts the stages of blood production in life before birth.					
Defines the bone marrow structure.					
Count the cells seen during erythropoiesis and explain their morphology.					
Counts the factors affecting erythropoiesis.					
Explain the development of granulocytes and define the cells seen in this process.					
Explain the development of monocytes.					
Explain the development of lymphocytes.					
Defines megakaryocytes and explains thrombocyte development.					
Counts the tissues and organs involved in the structure of the immune system.					
Explain how to count the cells of the immune system.					
Explain the histological structure and functions of lymph nodes.					
Explain the histological structure and functions of the thymus.					
Explain the histological structure and functions of tonsils.					
Explain the histological structure and functions of the spleen.					
Interprets preparations and images related to lymphoreticular organs.					
It explains when and where lymphoid organs begin to develop.					
Explains the developmental stages of lymphoid organs in detail.					
Interprets clinical problems.					
The respiratory system counts the differences between the conductive part and the respiratory part.					
Counts and explains respiratory epithelial cells.					
Explain the histology of nasal cavity, vestibulum nazi, regio respiratoria and regio olfactory.					
Explain the histological structure of the paranasal sinuses.					
Explain the histological structure of the nasopharynx.					
Explain the histological structure of the larynx.					
Explain the histological structure of the epiglottis.					
Trachea explains its histological structure.					
Explain the histological features of primary, secondary and tertiary bronchi.					

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Counts the trachea and bronchial differences.			
Explain the histological structure of bronchioles, terminal and respiratory bronchioles.			
It distinguishes between bronchi and bronchioles.			
The ductus and saccus alveolaris describe the alveolar wall and alveolar cells.			
It is considered as the blood air barrier and explains its properties.			
Interprets the microscopic view of organs related to the respiratory system.			
Explain the development of nasal cavities.			
Define the respiratory system primordium.			
Explain the development of the larynx and trachea.			
Explain the development of bronchi and lungs.			
Counts the congenital malformations in the respiratory system.			
Teaching Methods			
Assessment Methods			
Lecture Schedule			
Sequence	Topics	Preliminary Preparation	
1	BIOPHYSICS: structure and functions of heart muscle cells, methods for functional analysis (EEG, MRI, PET etc)		
2	PHYSIOPATHOLOGY: arrhythmias, heart failure, heart valve disease, coronary artery disease, atherosclerosis, pericardial disease, hypertension etc, case discussion		
3	HISTOLOGY AND EMBRYOLOGY: circulatory system development, blood cells, hematopoiesis, lymphoid system		
4	MEDICAL MICROBIOLOGY: innate and adaptive immune systems, T and B cell development and functions, immune tolerance and autoimmunity, organ transplantation, cancer immunology and immune deficiencies		
5	ANATOMY: cardiovascular system introduction, pericardium, heart, clinic, fetal circulation, arcus aortae, aorta thoracica, mediastinum		
6	PHYSIOLOGY: blood and circulatory system physiology		
7	BIOCHEMISTRY: blood glucose, biochemistry of anemias in different conditions		
Evaluation Methods		Weight(%)	
Midterm Exam		60	
General Exam		40	
Resources			