

Anatomy of the cardiovascular system practical course plan

Semester: Second	Year: 2025-2026
M.D. program Course Syllabus	
Course Title: Anatomy of the cardiovascular system practical	Department: Department of Anatomical Sciences
Course Code: 1234099	Instructor: Dr. Hossein Salehi and Dr. Mohsen Asgari
Location of teaching the course: Class 204	Credit Hours: 17 hours
Prerequisite: none	Credit Units: 1
Office address: Faculty of Medicine, Department of Anatomical Sciences	
Tel: 031-37929157	Email: ho_salehi@med.mui.ac.ir
Number of students : 55	
Brief course description: This course provides an integrated study of the gross anatomy and histology of the cardiovascular system. It covers the anatomy of the heart, pericardium, coronary circulation, great vessels, and mediastinum, together with the microscopic structure of the heart and blood vessels. Emphasis is placed on the relationship between structure and function, anatomical basis of common cardiovascular diseases, and the application of anatomical knowledge to clinical practice and medical imaging. The course aims to provide a solid foundation for understanding cardiovascular physiology, pathology, and clinical medicine.	
Learning outcomes: On satisfying the requirements of this course, students will have the knowledge and skills to: 1. Describe the microscopic organization of the heart and blood vessels. 2. Identify the chambers, valves, septa, and conducting system of the heart. 3. Describe the coronary arterial supply and venous drainage of the heart. 4. Explain the anatomy of the mediastinum and pericardium. 5. Identify the major arteries and veins of the thorax. 6. Correlate cardiovascular anatomy with common clinical conditions such as myocardial infarction, coronary artery disease, cardiac tamponade, congenital heart defects, and valvular diseases. 7. Interpret basic cardiovascular anatomy in radiographs, CT scans, echocardiography, and coronary angiography.	
References (Text books): 1- Histology textbook: Basic histology: Text & Atlas (chapter 11) By: Junqueira, LS & Carneiro, J (preferably the latest edition). 2- Gray's Anatomy for Students	

ASSESSMENT TOOLS

The assessment tools that will be used to test students' ability to understand the course material and gain the skills and competencies stated in learning outcomes)

ASSESSMENT TOOLS	From 20
Midterm Exam (Practical histology)	7.5
Final Exam (Practical anatomy)	11.5
Class activities	1
TOTAL MARKS	20

COURSE SYLLABUS

Week	Topic	Learning Objectives	References
1	Histology of the Cardiovascular System	Histology of the heart wall (endocardium, myocardium, epicardium), cardiac skeleton, conducting system, blood vessels (elastic, muscular arteries, veins, capillaries)	Junqueira Ch. 11
2	Thorax and Pericardium	Thoracic wall review, mediastinum, pericardium, fibrous and serous pericardium, pericardial sinuses, heart position and orientation, external features, cardiac surfaces and borders	Gray's Anatomy Ch. 3
3	Internal Anatomy of the Heart	Right atrium, right ventricle, left atrium, left ventricle, cardiac valves, fibrous skeleton, coronary circulation, venous drainage, cardiac conduction system, clinical anatomy of coronary artery disease	Gray's Anatomy Ch. 3
4	Great Vessels and Mediastinum	Ascending aorta, aortic arch and branches, pulmonary trunk, superior and inferior vena cava, azygos system, pulmonary veins, posterior mediastinum, lymphatic drainage, autonomic innervation of the heart	Gray's Anatomy Ch. 3
5	Applied Cardiovascular Anatomy	Surface anatomy, heart imaging (X-ray, CT, echocardiography), coronary artery dominance, pericardiocentesis, coronary angiography,	Gray's Anatomy + Clinical Anatomy

