

Planning and Quality Assurance Affairs

Form (A)

Course Specifications

General Information

Course name	Cardiovascular System
Course number	MDCN2624
Faculty	
Department	
Course type	Major Needs
Course level	2
Credit hours (theoretical)	5
Credit hours (practical)	1
Course Prerequisites	

Course Objectives

1	- Identify the anatomy of mediastinum, heart chambers, valves, general and Topographic of the great vessels and their distribution
2	- Describe the microscopic appearance of different parts of the cardiovascular system, normal embryological development with their common congenital abnormalities
3	- Describe and understand the electrocardiogram cardiac cycle, hemodynamics, regulation of blood flow and blood pressure, microcirculations, and the mechanism of circulatory shock
4	- Understand the metabolism of the cardiac muscles and the value of the cardiac enzymes and Troponins and their role in the diagnosis of acute myocardial disease
5	- Recognize the characteristics of microorganisms that cause infection of the cardiovascular system, their pathogenicity and methods of identification
6	- Define with the more common types of cardiovascular diseases with emphasis on (etiology, mechanism, morphology and briefly to correlate the pathological aspects of diseases with clinical manifestations).
7	- Understand the mechanisms of action, pharmacokinetics, uses and adverse effects of commonly used drugs in the treatment of cardiac failure, cardiac arrhythmias, hypertension, angina and drugs used in hyperlipidemias

Intended Learning Outcomes

Knowledge and Understanding	<ul style="list-style-type: none"> * Explain and classify common cardiovascular conditions, including diagnostic tests and therapeutic approaches * Explain the electrical conductivity of the heart and factors that lead to common dysrhythmias
Intellectual Skills	<ul style="list-style-type: none"> * Analyze factors leading to hypertension, as well as approaches useful in preventing and treating the condition
General Skill	<ul style="list-style-type: none"> * Compare and contrast the various forms of shock and the basis of therapeutic interventions

Course Contents

- 1 - Mediastinum & pericardium (Anatomy)
- 2 - Heart chambers, valves Conductive system and Innervations of the heart (Anatomy)
- 3 - Development of The heart (Anatomy)
- 4 - Organization of CVS (Physiology)
- 5 - Histology of the myocardium and blood vessels (Anatomy)
- 6 - Surface anatomy of the CVS (Anatomy)
- 7 - Physiology of cardiac muscle (Physiology)
- 8 - ECG (Physiology)
- 9 - Cardiac arrhythmia (Physiology)
- 10 - Antiarrhythmic drugs (Pharmacology)
- 11 - Cardiac cycle (Physiology)
- 12 - Cardiac Output & Its regulation (Physiology)
- 13 - Pumping of the heart (Physiology)
- 14 - Metabolism in the cardiac muscle under physiological and pathological conditions (Biochemistry)
- 15 - Microbiology of carditis (Pathology)
- 16 - Valvular heart disease. Rheumatic fever and Rheumatic heart disease1 (Pathology)
- 17 - Endocarditis Myocarditis (Pathology)
- 18 - Cardiomyopathy-Pericardium and cardiac tumors (Pathology)
- 19 - Cardiac enzymes and other proteins markers (Biochemistry)
- 20 - Blood vessels I-Arterial system (Anatomy)
- 21 - Blood vessels II- Venous system (Anatomy)
- 22 - Development of the vascular system (Anatomy)
- 23 - Blood pressure (Physiology)
- 24 - Microcirculation (Physiology)
- 25 - Plasma lipoproteins and cholesterol(Biochemistry)
- 26 - Arteriosclerosis Atherosclerosis (Pathology)
- 27 - Antihypertensive drugs (Pharmacology)
- 28 - Hyperlipidamias (Pharmacology)
- 29 - Drugs used in the treatment of heart failure (Pharmacology)

Teaching and Learning Methods

- 1 - Lectures
- 2 - videos and simulation labs
- 3 - case scenario simulation of common clinical cases

Teaching and Learning Methods for the Disabled Students

- 1 - Lectures
- 2 - Help each student according to his needs and his condition

Students Assessment

<u>Assessment Method</u>	<u>TIME</u>	<u>MARKS</u>
paper 1 exam	60	40
paper 2 exam	60	40
practical exam	60	20

Books and References

Course note	doctors lectures notes
Essential books	Clinical Anatomy for Medical Students. By R.S. Snell, 8th Edition, 2008 Basic Histology. By L. Carlos Junqueira, 12th edition, 2010 Textbook of Medical physiology. By Guyton and Hall, 11th edition, 2006 Medical Microbiology. An Introduction to infectious Diseases. By Sheries, 5th edition, 2010. .
Recommended books	Basic Pathology. By Kumar, Cotran and Robbins, 8 th edition, 2009