

SEMESTER I & II
LSM3212 HUMAN PHYSIOLOGY: CARDIOPULMONARY SYSTEM

Prerequisite: LSM2101

Workload: 22 lecture hours + 6 tutorial hours + 6 practical hours + 14 hours assignments/Self-directed study

The heart and lungs are central to the maintenance of homeostasis in the human body by bringing essential materials to and removing wastes from the body's cells. This module covers the basic physiology of the cardiovascular and pulmonary systems using exercise to illustrate the onset of homeostatic imbalances and the body's responses to restore homeostasis. Students will be able to identify the benefits that exercise imparts to cardiorespiratory fitness and overall health.

S/N	Topics	Lecture hours	
		Semester I	Semester II
1.	Blood Overview and Composition and functions of blood Blood cell production and Hemostasis Blood Grouping	6 HS	6 HS
2.	Cardiovascular System (CVS) Overview and Composition and functions of CVS Electrophysiology of the heart and ECG Mechanical aspects of the heart function Principles of circulatory system and fluid exchange Special circulations	6 ZA 2-GJM (Guest)	6 KM 2-FT (Guest)
3.	Respiratory System Breathing Gas Exchange, Gas Transport Control of Breathing Relevance of exercise to the RS	6 CZ 2-GJM (Guest)	6 CZ 2-FL (Guest)
	Practicals 1. ECG and heart function 2. Blood pressure and postural hypotension 3. VO ₂ max		
		Total Lectures: 22h	
		Tutorials: 6h	
		Practicals: 6h	
		Assignments/Self-directed study: 14h	
		Total hours: 48h	

TEXT BOOK: Human Physiology: From Cells to Systems with CB CourseSmart eBook , 8th Edition
 Sherwood

MODE OF ASSESSMENT: 60% Continual Assessments (30% midterm test; 15% assignment, 15% practical reports),
 40% Final Exam

MODULE CO-ORDINATOR:

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LECTURERS:

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