

SEMESTER I & II
LSM3212 – HUMAN PHYSIOLOGY: CARDIOPULMONARY SYSTEM

Prerequisite: LSM2101

Workload: 24 lecture hours + 6 tutorial hours + 10 practical hours + 10 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	Introduction to exercise physiology	FL (guest)	FL (guest)
2	Blood Overview and Composition and functions of blood Blood cell production and Hemostasis Blood Grouping	6 WCT	6 HS
3	Cardiovascular System Autonomic nervous system Electrical activity of the heart Cardiac mechanics, cardiac cycle Cardiac output Blood pressure Relevance of exercise to the CVS	6 LL 2- FL (guest)	6 LL 2-FL (guest)
4	Respiratory System Breathing Gas Exchange, Gas Transport Control of Breathing Relevance of exercise to the RS	6 ZA 2- FL (guest)	6 DY 2- FL (guest)
Practicals			
1	Effects of exercise on ECG and heart function		
2	Metabolic (VO ₂ max) and postural hypotension		
3	Postural hypotension		
		Total lecture hours : 24h	
		Total tutorial hours : 6h	
		Total practical hours : 10h	
		Assignments/Self directed study : 10h	
		Total hours :	50h

TEXT BOOK: L. Sherwood 2004: Human Physiology: From cells to Systems 5th edition

MODE OF ASSESSMENT: 60% Continual Assessments (20% midterm test; 40% practical reports + assignments), 40% Final Exam

MODULE CO-ORDINATOR:

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