

Name of Faculty	:	Faculty of Science
Name of Program	:	Bachelor of Science
Course Code	:	2BSL04
Course Title	:	Human Anatomy and Physiology - II
Type of Course	:	Professional Core
Year of Introduction	:	2023-24

Prerequisite	:	Recall the basics of Anatomy and Physiology.
Course Objective	:	To introduce the students to the concepts related to General anatomy, Respiratory, Circulatory, Digestive and Excretory system. To teach basic physiological concepts related to General physiology, Haematology, Nerve-Muscle physiology, Cardiovascular, Digestive system & Respiratory physiology.
Course Outcomes	:	At the end of this course students will be able to:
	CO1	To recall the basic physiological concepts of Respiratory physiology
	CO2	To understand the basic physiological concepts of Cardiovascular physiology
	CO3	Demonstrate and understand the basic anatomy of Respiratory and Circulatory system
	CO4	Recall the basic anatomy of Digestive and Excretory system

Teaching and Examination Scheme

Teaching Scheme (Contact Hours)			Credits	Examination Marks				
				Theory Marks		Practical Marks		Total Marks
L	T	P	C	SEE	CIA	SEE	CIA	
3	0	2	4	50	25	50	25	150

Legends: L-Lecture; T-Tutorial/Teacher Guided Theory Practice; P – Practical, C – Credit, SEE – Semester End Examination, CIA - Continuous Internal Assessment (It consists of Assignments/Seminars/Presentations/MCQ Tests, etc.)

Course Content

Unit No.	Topics	Teaching Hours	Weightage	Mapping With COs
1	Respiratory System - Introduction to Respiratory system, Larynx, Thoracic cage and diaphragm, Lung & Pleura, Trachea & Bronchopulmonary segments, Mediastinum Circulatory System - Types of blood vessels, Heart & Pericardium, Coronary Circulation, Overview of mediastinum, Blood vessels of Thorax.	11	24.44%	CO3
2	Digestive System - GIT I- Pharynx, Oesophagus, GIT II- Stomach, GIT III- Small and Large Intestine, GIT IV- Liver & Gall Bladder, GIT V- Spleen, GIT VI- Pancreas, Salivary glands. Excretory System - Kidney, Ureter, Bladder, Urethra, Pelvis dynamic	11	24.44%	CO4
3	Respiratory System - Physiologic anatomy, functions of respiratory system, non respiratory functions of lung, Mechanism of respiration, Lung Volumes & capacities.	10	22.22%	CO1
4	Cardio vascular system - Introduction, general organization, functions & importance of CVS, Structure of heart, properties of cardiac muscle, Junctional tissues of heart & their functions, Origin & spread of Cardiac Impulse, cardiac pacemaker, Cardiac cycle & ECG, Heart Rate & its regulation, Cardiac output, Blood Pressure definition & normal values, Physiological needs & variation, regulation of BP	13	28.89%	CO2

Suggested Distribution of Theory Marks Using Bloom's Taxonomy						
Level	Remembrance	Understanding	Application	Analyse	Evaluate	Create
Weightage	50	50	-	-	-	-

NOTE: This specification table shall be treated as a general guideline for the students and the teachers. The actual distribution of marks in the question paper may vary slightly from above table.

Suggested List of Experiments

Sr. No.	Name of Experiment	Teaching Hours
1	Respiratory System - Introduction to Respiratory system, Larynx, Thoracic cage and diaphragm, Lung & Pleura, Trachea & Broncho-pulmonary segments, Media stinum	02
2	Overview of media stinum, Blood vessels of Thorax	02
3	Excretory System - Kidney, Ureter, Bladder, Urethra	02
4	Pelvic diaphragm	02
5	Circulatory System - Types of blood vessels, Heart & Pericardium, Coronary Circulation	02
6	Study of Microscope and its use, Collection of Blood and study of Haemocytometer	02
7	Haemoglobinometry	02
8	White Blood Cell count	02
9	Red Blood Cell count	02
10	Determination of Blood Groups	02
11	Leishman's staining and Differential WBC Count	02
12	Determination of Bleeding Time, Determination of Clotting Time	02
13	Pulse & Blood Pressure Recording, Auscultation for Heart Sounds	02
14	Artificial Respiration -Demonstration, Spirometry-Demonstration	02

Major Equipment /Instruments

Sr. No.	Name of Major Equipment/ Instruments and Software
1	Analytical Balance
2	Various organ models of human body
3	Micropipettes
4	Stains
5	ABO Blood grouping kit
6	Neubauer haemocytometry
7	Haemoglobinometer

Suggested Learning Websites

Sr. No.	Name of Website
1	https://guides.lib.uw.edu/c.php?g=345740&p=2329795
2	https://guides.lib.uw.edu/c.php?g=345740&p=2329795

Reference Books

Sr. No.	Name of Reference Books
1	B.D. Chaurasia: Volume I-Upper limb & Thorax, Volume II- Lower limb, Abdomen & Pelvis Volume III- Head, Neck, Face Volume IV- Brain-Neuroanatomy
2	Vishram Singh: Textbook of Anatomy Upper limb & Thorax Textbook of Anatomy Abdomen & Lower limb Textbook of Head neck and Brain
3	Peter L. Williams And Roger Warwick:- Gray's Anatomy - Descriptive and Applied, 36th Ed; Churchill Livingstone.
4	Inderbirsingh, G P Pal : Human Embryology
5	T.S. Ranganathan : Text book of Human Anatomy
6	G.J. Tortora& N.P Anagnostakos: Principles of Anatomy and Physiology
7	Textbook of Medical Physiology, Guyton , 2 nd South Asia Edition
8	Textbook of Physiology Volume I & II (for MBBS) - Dr. A. K. Jain.
9	Comprehensive textbook of Medical Physiology Volume I & II - Dr. G. K. Pal
10	Textbook of human Physiology for dental students - Indukhurana 2 nd edition.
11	Principles of Physiology - Devasis Pramanik, 5 th edition.