

<b>Name of Faculty</b>	:	Faculty of Science
<b>Name of Program</b>	:	Bachelor of Science
<b>Course Code</b>	:	1BSL03
<b>Course Title</b>	:	Human Anatomy and Physiology - I
<b>Type of Course</b>	:	Professional Core
<b>Year of Introduction</b>	:	2023-24

<b>Prerequisite</b>	:	Recall the basics of Anatomy and Physiology.
<b>Course Objective</b>	:	To introduce the students to the concepts related to General anatomy, Muscular systems. To teach basic physiological concepts related to General physiology, Haematology, Nerve-Muscle physiology, Cardiovascular, Digestive system.
<b>Course Outcomes</b>	:	At the end of this course students will be able to:
	CO1	Remember and Comprehend the normal disposition, interrelationships, gross, functional and applied anatomy of various structures in the human body.
	CO2	To understand the basic physiological concepts of General physiology
	CO3	To understand the basic physiological concepts of Hematology
	CO4	To understand the basic physiological concepts of digestive physiology

### 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	Introduction to Anatomy , Terminology, Cell and Cell division, Tissues of body, Skin Skeletal System - Classification of bones, Parts of developing long bone and its blood supply, Joints I- Classification of joints, Joints II- Synovial Joint, Appendicular skeleton I- Bones of upper Limb, Appendicular skeleton II- Bones of lower limb, Axial skeleton-I , Axial skeleton-II	10	22.22%	CO1
2	Muscular System - Muscle I-Types, Muscle II- Muscle groups and movements, Muscles of Upper limb, Muscles of lower limb, Muscles of Neck, Muscles of back , Muscles of abdomen Joints - Shoulder, Hip , Knee , Movements and muscle groups producing movements at other joints	10	22.22%	CO1
3	<b>General Physiology-</b> Introduction to physiology, Homeostasis, Transport Across cell membrane <b>Blood - Composition, properties and functions of Blood,</b> Haemopoiesis, Haemogram (RBC, WBC, Platelet count, Hb Concentrations), Blood Groups - ABO and RH grouping, Coagulations & Anticoagulants, Anaemias: Causes, effects & treatment, Body Fluid: Compartments, Composition, Immunity - Lymphoid tissue	15	33.34%	CO3
4	<b>Digestive system</b> - General Introduction, organization, innervations & blood supply of Digestive system, Composition and functions of all Digestive juices, Movements of Digestive System (Intestine), Digestion & Absorption of Carbohydrate, Proteins and Fats	10	22.22%	CO4

Suggested Distribution of Theory Marks Using Bloom's Taxonomy						
Level	Remembrance	Understanding	Application	Analyse	Evaluate	Create
Weightage	25	75	-	-	-	-

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	Cell Introduction to Anatomy, Terminology, Cell and Cell division, Tissues of body, Skin	02
2	Classification of bones, Parts of developing long bone and its blood supply	02
3	Classification of joints, Joints II- Synovial Joint, Appendicular skeleton I- Bones of upper Limb, Appendicular skeleton II- Bones of lower limb, Axial skeleton-I , Axial skeleton-II	02
4	Muscular System - Muscle I-Types, Muscle II- Muscle groups and movements, Muscles of Upper limb, Muscles of lower limb, Muscles of Neck, Muscles of back , Muscles of abdomen	02
5	Muscles- Shoulder, Hip, Knee, Movements and muscle groups producing , movements at other joints	02
6	Movements and muscle groups producing movements at other joints	02
7	Study of Microscope and its use, Collection of Blood and study of Haemocytometer	02
8	Haemoglobinometry	02
9	White Blood Cell count	02
10	Red Blood Cell count	02
11	Determination of Blood Groups	02
12	Leishman's staining and Differential WBC Count	02
13	Determination of Bleeding Time, Determination of Clotting Time	02
14	Pulse & Blood Pressure Recording, Auscultation for Heart Sounds	02
15	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
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1	<a href="https://guides.lib.uw.edu/c.php?g=345740&amp;p=2329795">https://guides.lib.uw.edu/c.php?g=345740&amp;p=2329795</a>
2	<a href="https://guides.lib.uw.edu/c.php?g=345740&amp;p=2329795">https://guides.lib.uw.edu/c.php?g=345740&amp;p=2329795</a>

### 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 <sup>nd</sup> 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 <sup>nd</sup> edition.
11	Principles of Physiology - Devasis Pramanik, 5 <sup>th</sup> edition.