



Program	Bachelor of Pharmacy (BPharm)	Semester - 2
Type of Course	-	
Prerequisite		
Course Objective	-	
Effective From A.Y.	2023-24	

Teaching Scheme (Contact Hours)				Examination Scheme				
Lecture	Tutorial	Lab	Credit	Theory Marks		Practical Marks		Total Marks
				External Marks (T)	Internal Marks (T)	External Marks (P)	Internal Marks (P)	
3	1	4	6	75	25	35	15	150

SEE - Semester End Examination, CIA - Continuous Internal Assessment (It consists of Assignments/Seminars/Presentations/MCQ Tests, etc.)

Course Content		T - Teaching Hours W - Weightage	
Sr.	Topics	T	W
1	UNIT-1 1. Nervous system Organization of nervous system, neuron, neuroglia, classification and properties of nerve fibre, electrophysiology, action potential, nerve impulse, receptors, synapse, neurotransmitters. Central nervous system: Meninges, ventricles of brain and cerebrospinal fluid. structure and functions of brain (cerebrum, brain stem, cerebellum), spinal cord (gross structure, functions of afferent and efferent nerve tracts, reflex activity)	10	22
2	UNIT-2 2. Digestive system Anatomy of GI Tract with special reference to anatomy and functions of stomach, (Acid production in the stomach, regulation of acid production through parasympathetic nervous system, pepsin role in protein digestion) small intestine and large intestine, anatomy and functions of salivary glands, pancreas and liver, movements of GIT, digestion and absorption of nutrients and disorders of GIT. 3. Energetics Formation and role of ATP, Creatinine Phosphate and BMR.	6	14
3	UNIT-3 4. Respiratory system Anatomy of respiratory system with special reference to anatomy of lungs, mechanism of respiration, regulation of respiration Lung Volumes and capacities transport of respiratory gases, artificial respiration, and resuscitation methods. 5. Urinary system Anatomy of urinary tract with special reference to anatomy of kidney and nephrons, functions of kidney and urinary tract, physiology of urine formation, micturition reflex and role of kidneys in acid-base balance, role of RAS in kidney and disorders of kidney.	10	22
4	UNIT-4 6. Endocrine system Classification of hormones, mechanism of hormone action, structure and functions of pituitary gland, thyroid gland, parathyroid gland, adrenal gland, pancreas, pineal gland, thymus and their disorders.	10	22
5	UNIT-5	9	20



Course Content		T - Teaching Hours W - Weightage	
Sr.	Topics	T	W
	7. Reproductive system Anatomy of male and female reproductive system, Functions of male and female reproductive system, sex hormones, physiology of menstruation, fertilization, spermatogenesis, oogenesis, pregnancy and parturition 8. Introduction to genetics Chromosomes, genes and DNA, protein synthesis, genetic pattern of inheritance		
Total		45	100

Suggested Distribution Of Theory Marks Using Bloom's Taxonomy					
Level	Remembrance	Understanding	Application	Analyze	Evaluate
Weightage	40	30	10	10	10

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.

Course Outcomes	
At the end of this course, students will be able to:	
C01	Ability to learn about anatomy and physiology of nervous system and digestive system.
C02	Ability to learn about anatomy and physiology of respiratory and urinary system.
C03	Ability to learn about anatomy and physiology of endocrine system.
C04	Ability to learn about anatomy and physiology of reproductive system and genetics.
C05	Ability to perform physiological experiments.

Reference Books	
1.	. Essentials of Medical Physiology (TextBook) By K. Sembulingam and P. Sembulingam. Jaypee brothers medical publishers, New Delhi.
2.	Anatomy and Physiology in Health and Illness (TextBook) By Kathleen J.W. Wilson, Churchill Livingstone, New York
3.	Physiological basis of Medical Practice By Best and Taylor Williams & Wilkins Co, Riverview, MIUSA
4.	Text book of Medical Physiology By Arthur C, Guyton and John.E. Hall. Miamisburg, OH, U.S.A.
5.	Principles of Anatomy and Physiology (TextBook) By Tortora Grabowski. Palmetto, GA, U.S.A.
6.	Textbook of Human Histology (TextBook) By Inderbir Singh Jaypee brother's medical publishers, New Delhi.
7.	Textbook of Practical Physiology (TextBook) By C.L. Ghai Jaypee brother's medical publishers, New Delhi
8.	Practical workbook of Human Physiology (TextBook) By K. Srinageswari and Rajeev Sharma Jaypee brother's medical publishers, New Delhi.
9.	Human Physiology (vol 1 and 2) By Dr. C.C. Chatterje, Academic Publishers Kolkata



List of Practical

1.	To study integumentary and special senses using specimens and models.
2.	To demonstrate positive and negative feedback mechanism.
3.	To record BMI of your own body.
4.	To record your own body temperature.
5.	To study the structure and function of CNS using specimens and models.
6.	To study endocrine system using specimen and models
7.	To demonstrate the function of olfactory nerves.
8.	To study digestive, respiratory and cardiovascular system with the help of models, charts and specimens.
9.	To study urinary and reproductive system using models, charts and specimens.
10.	To determine tidal volume and vital capacity using spirometer.
11.	To demonstrate reflex activity.
12.	To demonstrate the visual acuity for distant vision.
13.	To demonstrate the general neurological examination.
14.	To study family planning devices/methods and pregnancy diagnosis test.
15.	To examine different types of taste.
16.	To study permanent slides of vital organs and gonads.

List of Tutorial

1.	Tutorial 1
2.	Tutorial 2
3.	Tutorial 3
4.	Tutorial 4
5.	Tutorial 5
6.	Tutorial 6
7.	Tutorial 7
8.	Tutorial 8
9.	Tutorial 9
10.	Tutorial 10
11.	Tutorial 11
12.	Tutorial 12
13.	Tutorial 13
14.	Tutorial 14
15.	Tutorial 15