

SEMESTER III

Programme	B. Sc. Family and Community Science				
Course Title	HUMAN PHYSIOLOGY				
Type of Course	Major				
Semester	III				
Academic Level	200 – 299				
Course Details	Credit	Lecture per week	Tutorial per week	Practical per week	Total Hours
	4	4	-	-	60
Pre-requisites	X level Science				
Course Summary	This course will help understand the structure and functioning of various organs. A understanding of the physiological processes will serve as a basis for assessment of nutritional problems and their interventions therein.				

Course Outcomes (CO):

CO	CO Statement	Cognitive Level*	Knowledge Category#	Evaluation Tools used
CO1	Enable the students to understand the fundamental principles of human physiology.	R	C	Instructor-created exams / Quiz
CO2	Describe the structure and functions of various organs of the body.	Ap	F	Practical Assignment / Observation of Practical Skills
CO3	Obtain a better understanding of the integration and regulation of physiological processes.	An	C	Instructor-created exams
CO4	Understand alterations of structure and functions in various organs and systems in disease condition	U	C	Instructor-created exams / Home Assignments

CO5	Evaluate biochemical reports and analyse lifestyle diseases	Ap	P	Practical assessment
* - Remember (R), Understand (U), Apply (Ap), Analyse (An), Evaluate (E), Create (C) # - Factual Knowledge(F) Conceptual Knowledge (C) Procedural Knowledge (P) Metacognitive Knowledge (M)				

Detailed Syllabus:

Module	Unit	Content	Hrs	Mks
I		Introduction to Human Physiology	15	18
	1	Cells and Tissues	1	
	2	Blood constituents, Functions of blood, Types and formation of blood cells blood coagulation, and blood groups.	3	
		Cardiovascular system		
	3	Heart – structure, properties of cardiac muscles,	2	
	4	Electrocardiogram,	2	
	5	blood pressure, factors influencing blood pressure	2	
	6	Cardiac cycle	2	
	7	types of circulation- portal, systemic and pulmonary	2	
	8	Lymphatic system- Lymph and its functions.	1	
II		Digestive system	15	31
	9	Mechanism of digestion	3	
	10	Functions of accessory organs - salivary glands, liver, pancreas.	4	
	11	Digestive enzymes;	3	
	12	Digestion and absorption of protein, fat, and carbohydrates.	5	
III		Endocrine system	10	12
	13	Functions of Pituitary glands,	2	
	14	Thyroid glands, Parathyroid glands,	2	
	15	Adrenal glands	2	

	16	Sex glands- ovaries and testis.	4	
IV	Reproductive and Excretory system		8	37
	17	Structure and Functions of kidney, nephron	2	
	18	Formation and composition of urine, osmoregulation, and micturition.	1	
	19	Structure of Male reproductive system	2	
	20	Structure of female reproductive system	1	
	21	Menstrual cycle	1	
	22	Parturition	1	
V	Open Ended Module: Related experiences		12	
	23	Making of working models/checking blood pressure by syphygomanometer/Blood group detection/blood count/ training in first aid		
	24	Group work- medical camp/Hb detection/awareness classes Blood Report analysis		

Mapping of COs with PSOs and POs :

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PO1	PO2	PO3	PO4	PO5	PO6	PO7
CO 1	2	3	3	2	-	1	3	2	1	1	1	2	3
CO 2	2	3	3	2	-	3	3	2	1	1	1	2	3
CO 3	1	3	3	2	-	3	3	2	1	1	1	2	3
CO 4	1	3	3	2	-	3	3	2	1	1	1	2	3
CO 5	1	3	3	2	-	3	3	2	1	1	1	2	3

Correlation Levels:

Level	Correlation
-	Nil
1	Slightly / Low

2	Moderate / Medium
3	Substantial / High

Assessment Rubrics:

- Regular lectures, demonstrations, Exercises on observation and follow up with group discussions, case studies, ICT enabled teaching and learning experiences in terms of video lessons.
- Assignments (20%)
- Final Exam (70%)

References

1. Bell, G.H. Davidson, J.N. and Scarborough. H(1970). Textbook of physiology and biochemistry, ELBS Edition. The English language Book Society.
2. Best. H. and Taylor, B, The physiological Basis of Medical Practices, 8th edition, The William and Wilkinsons company.
3. Chandramouli. R. (2003) Textbook of Physiology, Jaypee brothers, medical publishers(p)Ltd. New Delhi 110 002.
4. Gutan, A.C. Textbook of medical Physiology, 14th Edition. W.B. Saunders Company Philadelphia.
5. Guyton, A.C. and Hall, JB. (1996) Functions of Human Body, 4th Edition, W.B. Sanders Company, Philadelphia.
6. Jain, A.K.: Textbook of Physiology. Vol. I and II. Avichal Publishing Co., New Delhi.