

**FIRST YEAR
FIRST SEMESTER**

CODE	COURSE TITLE	TIME	FORM
	Introduction and Cell Physiology		
PHYS 1	Introduction and important definitions	1hr	L
PHYS 2	Cell physiology	1hr	L
PHYS 3	Transport of ions and molecules through the cell memb	1hr	L
PHYS 4	Transport of ions and molecules through the cell memb	1hr	L
PHYS 5	Transport of ions and molecules through the cell memb	1hr	L
PHYS 6	Total body water	1hr	L
PHYS 7	Homeostasis	1hr	L
	Physiology of the Nerve		
PHYS 8		1hr	L
PHYS 9	Membrane potentials and action potential I	1hr	L
PHYS 10	Membrane potentials and action potential II	1hr	L
PHYS 11	Propagation of action potential	1hr	L
PHYS 12	Plateau phase in some actions potentials	1hr	L
PHYS 13	excitation and the process of eliciting the action potenti	1hr	L
PHYS 14	Muscle and Nerve		
	Physiologic Anatomy of Skeletal muscle (Skeletal Mus	1hr	L
	Molecular Mechanism of Muscle contraction	1hr	L
	Energetics of muscle contraction	1hr	L
	Transmission of impulses from nerves to skeletal musc	1hr	L
PHYS 15	Muscle action potential	1hr	L
PHYS 16	Excitation- contraction coupling	1hr	L
PHYS 17	Contraction and Excitation of smooth muscle I	1hr	L
PHYS 18	Contraction and Excitation of smooth muscle II	1hr	L
PHYS 19	Contraction and Excitation of smooth muscle III	1hr	L
PHYS 20	Revision	2hrs	L
PHYS 21	Practical I	2hrs	P
PHYS 22	Practical II	2hrs	P
PHYS 23	Practical III	2hrs	P
PHYS 24	Practical IV	2hrs	P

**FIRST YEAR
SECOND SEMESTER**

CODE	COURSE TITLE	TIME	FORM
	Metabolism		
METAB PHYS 1	Energy balance and metabolic rate I	1hr	L
METAB PHYS 2	Energy balance and metabolic rate II	1hr	L
METAB PHYS 3	Energy balance and metabolic rate III	1hr	L
METAB PHYS 4	Body temperature, temperature regulation and fever I	1hr	L
METAB PHYS 5	Body temperature, temperature regulation and fever II	1hr	L
METAB PHYS 6	Body temperature, temperature regulation and fever II	1hr	L
METAB PHYS 7	Dietary Balance and regulation of food intake	1hr	L
METAB PHYS 8	Obesity and starvation	1hr	L
METAB PHYS 9	Metabolism during muscular exercise	1hr	L
METAB PHYS 10	Revision	1hr	L
CODE	COURSE TITLE	TIME	FORM
	Physiology of blood		
HLS PHYS 1	Introduction; properties & functions of blood. Haematocrit	1hr	L
HLS PHYS 2	Plasma proteins	1hr	L
HLS PHYS 3	Haematocrit	1hr	L
HLS PHYS 4	Haematocrit	2hrs	P
HLS PHYS 5	RBC I	1hr	L
HLS PHYS 6	RBC II	1hr	L
HLS PHYS 7	Haemoglobin estimation	2 hrs	P
HLS PHYS 8	Blood indices	1hr	L
HLS PHYS 9	Blood indices	2 hrs	P
HLS PHYS 10	Haemolysis & osmotic fragility	1hr	L
HLS PHYS 11	Haemolysis & osmotic fragility	2 hrs	P
HLS PHYS 12	Blood groups	1hr	L
HLS PHYS 13	Blood grouping	1hr	L
HLS PHYS 14	WBC Platelets	1hr	L
HLS PHYS 15	Haemostasis mechanisms	1hr	L
HLS PHYS 16	Platelets & functions	1hr	L
HLS PHYS 17	Blood coagulation mechanisms	1hr	L
HLS PHYS 18	Natural intravascular anticoagulants	1hr	L
HLS PHYS 19	Fibrinolytic system	1hr	L
HLS PHYS 20	Excessive bleeding	1hr	L
HLS PHYS 21	Blood coagulation tests	2 hrs	P

HLS PHYS 22	Spleen function and R.E.S.	1hr	L
HLS PHYS 23	Immune system I	1hr	L
HLS PHYS 24	Immune system II	1hr	L
CODE	COURSE TITLE	TIME	FORM
	THE AUTONOMIC NERVOUS SYSTEM		
ANS PHYS 1	General organization of the A. N. S.	1hr	L
ANS PHYS 2	Physiologic anatomy of the sympathetic and Parasympa	1hr	L
ANS PHYS 3	Autonomic ganglia I	1hr	L
ANS PHYS 4	Autonomic ganglia II	1hr	L
ANS PHYS 5	Sympathetic nervous system I	1hr	L
ANS PHYS 6	Sympathetic nervous system II	1hr	L
ANS PHYS 7	Sympathetic nervous system III	1hr	L
ANS PHYS 8	Parasympathetic nervous system I	1hr	L
ANS PHYS 9	Parasympathetic nervous system II	1hr	L
ANS PHYS 10	Parasympathetic nervous system III	1hr	L
ANS PHYS 11	Control of autonomic function I	1hr	L
ANS PHYS 12	Control of autonomic function II	1hr	L
ANS PHYS 13	Revision	1hr	L

**SECOND YEAR
FIRST SEMSTER**

CODE	COURSE TITLE	TIME	FORM
	Cardio Vascular System		
CVS PHYS 1	Introduction	1hr	L
CVS PHYS 2	Mechanism of heart beating	1hr	L
CVS PHYS 3	Properties of cardiac muscle (1) Excitability and action	1hr	L
CVS PHYS 4	Properties of cardiac muscle (2) Coontractility (Starling	1hr	L
CVS PHYS 5	Properties of cardiac muscle (3) Rhythmicity	1hr	L
CVS PHYS 6	Properties of cardiac muscle (4) Conductivity.	1hr	L
CVS PHYS 7	The cardiac cycle I	1hr	L
CVS PHYS 8	The cardiac cycle II	1hr	L
CVS PHYS 9	The arterial and venous pulsations and their abnormalit	2hrs	P
CVS PHYS 10	The heart sounds	2hrs	P
CVS PHYS 11	Normal E. C. G.	1hr	L
CVS PHYS 12	Methods for recording E. C. G, electro cardiographic lea	2hrs	P
CVS PHYS 13	The Mean electrical axis of the ventricular QRS and its	1hr	L
CVS PHYS 14	Conditions that cause abnormal voltage and shape of th	1hr	L
CVS PHYS 15	Cardiac Arrhythmia and the electrocardiographic interp	1hr	L
CVS PHYS 16	Cardiac Arrrhythmiias III, Atrial Paroxysmal tachycardi	1hr	L
CVS PHYS 17	Normal E. C. G. (apparatus)- connections-leads	2hr	P
CVS PHYS 18	Normal variations in different E. C. G. Leads	2hr	P
CVS PHYS 19	Einthoven's triangle and determination of electrical axis	2hr	P
CVS PHYS 20	Some ECG abnormalities .	2hr	P
CVS PHYS 21	Nerve supply of the heart, nervous control of the C. V.	1hr	L
CVS PHYS 22	Vagal tone, vasosenory areas and cardiovascular reflex	1hr	L
CVS PHYS 23	.Factors controlling the heart rate.	1hr	L
CODE	COURSE TITLE	TIME	FORM
	General Circulation		
CVS PHYS 24	The cardiac output (factors affecting it), cardiac work, r	1hr	L
CVS PHYS 25	Regulation of the cardiac output, Cardiac function curv	1hr	L
CVS PHYS 26	Venous Return- Systemic function curves	1hr	L
CVS PHYS 27	Cardiac reserve	1hr	L
CVS PHYS 28	Study of some clinical cases	1hr	L
CVS PHYS 29	Revision	1hr	L
CVS PHYS 30	Bio physics or medical physics of blood flow, blood pr	1hr	L
CVS PHYS 31	Arterial blood pressure and (Factors affecting it)	1hr	L

CVS PHYS 32	Nervous regulation of the circulation -Rapid control of	1hr	L
CVS PHYS 33	Local control of blood flow by the tissues and regulatio	1hr	L
CVS PHYS 34	Humoral regulation of circulation and ABP.	1hr	L
CVS PHYS 35	Humoral regulation of circulation and ABP.	1hr	L
CVS PHYS 36	Dominent role of the kidneys in long term regulation of	1hr	L
CVS PHYS 37	Dominent role of the kidneys in long term regulation of	1hr	L
CVS PHYS 38	Measurement of ABP	2hrs	P
	Special circulation.		
CVS PHYS 39	Micro-circulation	1hr	L
CVS PHYS 40	coronary & cerebral circulations	1hr	L
CVS PHYS 41	pulmonary & cutaneous circulations	1hr	L
	Skeletal muscle & splanchnic circulations	1hr	L
CVS PHYS 43	Effect of exercises on the circulatory system	1hr	L
CVS PHYS 44	Hemorrhage	1hr	L
CVS PHYS 45	circulatory shock	1hr	L
CVS PHYS 46	Study of some clinical cases	1hr	L
CODE	COURSE TITLE	TIME	FORM
	Respiratory system		
RESP PHYS 1	Overview: The two types of respiration, terminologies,	1hr	L
RESP PHYS 2	Pulmonary circulation characteristics, dynamics and co	1hr	L
RESP PHYS 3	Pulmonary ventilation (total and alveolar).Respiratory c	1hr	L
RESP PHYS 4	Intra-alveolar & IPP	1hr	L
RESP PHYS 5	Lung volumes and spirometry.	1hr	L
RESP PHYS 6	Work of breathing & Airway resistance	1hr	L
RESP PHYS 7	Surfactant	1hr	L
RESP PHYS 8	Pulmonary compliance	1hr	L
RESP PHYS 9	Diffusion across respiratory membrane.	1hr	L
RESP PHYS 10	Ventilation-perfusion relationships (Normal and abnorm	1hr	L
RESP PHYS 11	O2 transport	1hr	L
RESP PHYS 12	CO2 transport	1hr	L
RESP PHYS 13	Hypoxia.	1hr	L
RESP PHYS 14	Neural control of ventilation (Rhythm generator and re	1hr	L
RESP PHYS 15	Chemical control of ventilation (Peripheral and Central	1hr	L
RESP PHYS 16	Regulation of ventilation during exercise and sleep.	1hr	L
RESP PHYS 17	High altitude (acute and chronic mountain sickness).	1hr	L
RESP PHYS 18	Dyspnea, cyanosis and periodic breathing.	1hr	L
RESP PHYS 19	Artificial ventilation and O2 therapy.	1hr	L
RESP PHYS 20	Lung function tests (Obstructive and restrictive).	1hr	L
RESP PHYS 21	Practical- Pneumography.	2hrs	P
CODE	COURSE TITLE	TIME	FORM

	Urinary System		
URIN PHYS 1	Introduction, structure of the kidneys (the nephron)	1hr	L
URIN PHYS 2	Renal Blood flow and Pressures- Autoregulation.	1hr	L
URIN PHYS 3	The Juxtra glomerular apparatus renin system and renal	1hr	L
URIN PHYS 4	Measurement of renal blood flow (PAHA clearance)	1hr	L
URIN PHYS 5	Glomerular filtration and the glomerular filtrate.	1hr	L
URIN PHYS 6	Control of glomerular filtration rate and renal blood flow	1hr	L
URIN PHYS 7	Measurement of the glomerular filtration rate (inulin clearance)	1hr	L
URIN PHYS 8	Formation of urine by the kidney processing of the filtrate	1hr	L
URIN PHYS 9	Functions of the proximal convoluted tubules.	1hr	L
URIN PHYS 10	Tubular load and tubular transport Maximum.	1hr	L
URIN PHYS 11	Function of the loop of Henle (the countercurrent mechanism)	1hr	L
URIN PHYS 12	Functions of the distal convoluted tubules.	1hr	L
URIN PHYS 13	Diuresis and diuretic drugs.	1hr	L
URIN PHYS 14	Renal and associated mechanisms for controlling extracellular fluid	1hr	L
URIN PHYS 15	Renal regulation of blood volume and extracellular fluid	1hr	L
URIN PHYS 16	Electrolyte balance (Sodium Balance)	1hr	L
URIN PHYS 17	Potassium Balance	1hr	L
URIN PHYS 18	Chloride balance. Bicarbonate and calcium balance. Calcium	1hr	L
URIN PHYS 19	Renal handling of H ₂ O- Counter current mechanisms	1hr	L
URIN PHYS 20	H ⁺ sources, importance- Role of buffers	1hr	L
URIN PHYS 21	H ⁺ homeostasis-Respiratory & Renal mechanisms	1hr	L
URIN PHYS 22	Acid-base disturbances	1hr	L
URIN PHYS 23	Micturition and its abnormalities	1hr	L
URIN PHYS 24	Renal failure and uraemia	1hr	L

**SECOND YEAR
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CODE	COURSE TITLE	TIME	FORM
	ALIMENTARY		
ALIM PHYS 1	Introduction functions of the digestive system	1hr	L
ALIM PHYS 2	Motility function of the GIT	1hr	L
ALIM PHYS 3	Secretory function of the GIT	1hr	L
ALIM PHYS 4	Salivary secretion	1hr	L
ALIM PHYS 5	Mastication and Deglutition	1hr	L
ALIM PHYS 6		1hr	L
ALIM PHYS 7	Mechanism of gastric secretion	1hr	L
ALIM PHYS 8	The gastric juice, HCL secretion.	1hr	L
ALIM PHYS 9	Functions of the stomach, Gastric motility, Gastric emp	1hr	L
ALIM PHYS 10	Vomiting.	1hr	L
ALIM PHYS 11	Gastric function tests	1hr	L
ALIM PHYS 12	The pancreatic juice, The pancreatic enzymes.	1hr	L
ALIM PHYS 13	Control of pancreatic secretion	1hr	L
ALIM PHYS 14	Tests of pancreatic function	1hr	L
ALIM PHYS 15	Bile & gallbladder	1hr	L
ALIM PHYS 16	Functions of the gallbladder, Regulation of bile secretio	1hr	L
ALIM PHYS 17	Functions of bile , Bile salts, Bile pigments.	1hr	L
ALIM PHYS 18	Jaundice	1hr	L
ALIM PHYS 19	Effects of common bile duct obstruction, Van Den Berg	1hr	L
ALIM PHYS 20	The liver functions.	1hr	L
ALIM PHYS 21	Liver function tests.	1hr	L
ALIM PHYS 22	The intestinal secretion.	1hr	L
ALIM PHYS 23	Regulation of intestinal secretion, Intestinal movements	1hr	L
ALIM PHYS 24	Intestinal absorption of proteins, lipids & carbohydrates	1hr	L
ALIM PHYS 25	Intestinal absorption of H ₂ O & vitamins	1hr	L
ALIM PHYS 26	The large intestine (colon) , Functions of the large intes	1hr	L
ALIM PHYS 27	Intestinal flora- Defecation	1hr	L
ALIM PHYS 28	Constipation, Diarrhea	1hr	L
ALIM PHYS 29	Study of some clinical cases	1hr	L
CODE	COURSE TITLE	TIME	FORM
	Reproductive		
REP PHYS 1	Gametogenesis and sex differentiation	1hr	L
REP PHYS 2	Control of gonadal function	1hr	L
REP PHYS 3	The male reproductive system I	1hr	L

REP PHYS 4	The male reproductive system II	1hr	L
REP PHYS 5	The male reproductive system III	1hr	L
REP PHYS 6	The female reproductive system	1hr	L
REP PHYS 7	The sex cycles in females I	1hr	L
REP PHYS 8	The sex cycles in females II	1hr	L
REP PHYS 9	The ovarian hormones	1hr	L
REP PHYS 10	Pregnancy I	1hr	L
REP PHYS 11	Pregnancy II	1hr	L
REP PHYS 12	Functions of placenta	1hr	L
REP PHYS 13	Parturition	1hr	L
REP PHYS 14	Mummary glands and lactation	1hr	L
REP PHYS 15	Revision	1hr	L
CODE	COURSE TITLE	TIME	FORM
	ENDOCRINE GLANDS		
ENDO PHYS 1	The ant. Pituitary gland I	1hr	L
ENDO PHYS 2	The ant. Pituitary gland II	1hr	L
ENDO PHYS 3	The ant. Pituitary gland III	1hr	L
ENDO PHYS 4	The ant. Pituitary gland I	1hr	L
ENDO PHYS 5	The post pituitary gland IIII	1hr	L
ENDO PHYS 6	The post pituitary gland II	1hr	L
ENDO PHYS 7	The post pituitary gland III	1hr	L
ENDO PHYS 8	The thyroid gland I	1hr	L
ENDO PHYS 9	The thyroid gland II	1hr	L
ENDO PHYS 10	The thyroid gland III	1hr	L
ENDO PHYS 11	The thyroid gland IIII	1hr	L
ENDO PHYS 12	The adrenal cortex I	1hr	L
ENDO PHYS 13	The adrenall cortex II	1hr	L
ENDO PHYS 14	The adrenal cortex III	1hr	L
ENDO PHYS 15	The adrenal medulla I	1hr	L
ENDO PHYS 16	The adrenal medulla II	1hr	L
ENDO PHYS 17	The adrenal medulla III	1hr	L
ENDO PHYS 18	The parathyroid gland and calcium metabolism I	1hr	L
ENDO PHYS 19	The parathyroid gland and calcium metabolism II	1hr	L
ENDO PHYS 20	The parathyroid gland and calcium metabolism III	1hr	L
ENDO PHYS 21	Endocrine function of pancreas I	1hr	L
ENDO PHYS 22	Endocrine function of pancreas II	1hr	L
ENDO PHYS 23	Endocrine function of pancreas III	1hr	L
ENDO PHYS 24	Endocrine function of pancreas IIII	1hr	L
ENDO PHYS 25	The pineal gland	1hr	L
ENDO PHYS 26	Revision	1hr	L

ENDO PHYS 27	Revision	1hr	L
ENDO PHYS 28	Revision	1hr	L
ENDO PHYS 29	Revision	1hr	L
CODE	COURSE TITLE	TIME	FORM
	NEUROSCIENCES		
CNS PHYS 1	Organization and divisions of the nervous system	1hr	L
CNS PHYS 2	Neural synapses and transmitter substances	1hr	L
CNS PHYS 3	Sensory receptors, classification and generator potentials	1hr	L
CNS PHYS 4	Other properties of sensory receptors; adaptation & sensitization	1hr	L
CNS PHYS 5	Pain sensation and its types; cutaneous pain	1hr	L
CNS PHYS 6	Referred pain, Visceral pain and Hyperalgesia	1hr	L
CNS PHYS 7	Pain control system	1hr	L
CNS PHYS 8	Thermal sensations	1hr	L
CNS PHYS 9	Touch & pressure sensations	1hr	L
CNS PHYS 10	Proprioception	1hr	L
CNS PHYS 11	Somatic sensations from the head	1hr	L
CNS PHYS 12	Headache	1hr	L
CNS PHYS 13	Ascending sensory tracts	1hr	L
CNS PHYS 14	Examination of the sensory system	2hrs	P
CNS PHYS 15	Some diseases of the sensory system; syringomyelia & Tabes dorsalis	1hr	L
CNS PHYS 16	Motor functions of the spinal cord, the cord reflexes	1hr	L
CNS PHYS 17	Stretch reflex; arc & types	1hr	L
CNS PHYS 18	Properties of stretch reflex	1hr	L
CNS PHYS 19	Spinal muscle tone	1hr	L
CNS PHYS 20	Tendon Jerks	1hr	L
CNS PHYS 21	Supraspinal centres that influence stretch reflex	1hr	L
CNS PHYS 22	Examination of tendon Jerks	2hrs	P
CNS PHYS 23	Sensory and motor functions of cerebral cortex	1hr	L
CNS PHYS 24	The motor tracts	1hr	L
CNS PHYS 25	Upper and lower motor neurons	1hr	L
CNS PHYS 26	Nervous lesions; lesion in internal capsule	1hr	L
CNS PHYS 27	Hemi- and quadri- lesion of the spinal cord	1hr	L
CNS PHYS 28	The basal ganglia; connections & functions	1hr	L
CNS PHYS 29	Diseases of the basal ganglia	1hr	L
CNS PHYS 30	The cerebellum; connections & functions	1hr	L
CNS PHYS 31	The reticular formation and (R. A. S.)	1hr	L
CNS PHYS 32	Vestibular apparatus	1hr	L
CNS PHYS 33	Vestibular apparatus	1hr	L
CNS PHYS 34	The thalamus & hypothalamus	1hr	L
CNS PHYS 35	The limbic system	1hr	L

CNS PHYS 36	The cerebral cortex; visual & auditory areas	1hr	L
CNS PHYS 37	The cerebral cortex; Wernicke's area	1hr	L
CNS PHYS 38	The cerebral cortex; premotor & prefrontal areas	1hr	L
CNS PHYS 39	The cerebral cortex, intellectual functions of the brain	1hr	L
CNS PHYS 40	Learning and memory- amnesia	1hr	L
CNS PHYS 41	Speech & aphasia	1hr	L
CNS PHYS 42	Electrical activity of the brain	1hr	L
CNS PHYS 43	Sleep & its disorders	1hr	L
CNS PHYS 44	Postural reflexes	1hr	L
CNS PHYS 45	Some manifestations of neurological lesions	1hr	L
CNS PHYS 46	Study of some clinical cases	1hr	L
CODE	COURSE TITLE	TIME	FORM
	SPECIAL SENSE		
SPS 1	Properties of light & bio-optics	1hr	L
SPS 2	Structure of the eye; cornea & sclera- errors of refraction	1hr	L
SPS 3	Errors of refraction- pupillary light reflex	2hrs	P
SPS 4	Ciliary muscle, aqueous humor-glaucoma	1hr	L
SPS 5	Eye lens, accommodation & cataract	1hr	L
SPS 6	Retina; receptors, photopic, scotopic vision & field of vision	1hr	L
SPS 7	Photo-pigments	1hr	L
SPS 8	Visual pathways-lesions	1hr	L
SPS 9	The sense of hearing- external & middle ears	1hr	L
SPS 10	The sense of hearing- inner ear- Hearing tests	2hrs	P
SPS 11	Taste and smell	1hr	L
SPS12	Visual pathways-lesions		
SPS13	The sense of hearing- external & middle ears		
SPS14	The inner ear		
SPS15	Hearing tests		
SPS16	Taste and smell		