



Integral University, Lucknow

Effective from Session: 2026-27							
Course Code	BMRIT001	Title of the Course	Human Anatomy	L	T	P	C
Year	I	Semester	I	3	0	0	3
Pre-Requisite	Nil	Co-requisite	Nil				
Course Objectives	To ensure the knowledge of Human Anatomy.						

Course Outcomes: At the end of the course students will be able to:	
CO1	Describe the general anatomy of human body
CO2	Explain normal disposition of various structures and organs in the body and its clinical correlation
CO3	Describe the microscopic structure of various tissues
CO4	Determine the topography of various structures on the surface of the body
CO5	Identify and locate structures of the body
CO6	Identify organs and tissues under microscope
CO7	Point out various features of appearance of normal body in skiagrams

Unit No.	Title of the Unit	Topic and Contents	Contact Hrs.	Mapped CO
I	Introduction: Human Body as a Whole	Introduction: Human Body as a Whole Definition of anatomy and its subdivisions, Terms of location, positions and planes, Cell and its organelles, Epithelium – definition, classification, describe with examples, functions, Glands – classification, describe serous and mucous glands with examples, Basic tissues – classification with examples	08	CO1
II	Locomotion and Support	Locomotion and Support Cartilage – types, examples and histology Bone – classification, examples and histology. Parts of long bone, names of all bones, vertebral column and intervertebral disc. Fontanel's of fetal skull. Joints – classification of joints with examples, typical synovial joint (in detail). Muscular system – classification of muscular tissue and histology Important muscles of the body- Sternocleidomastoid, Trapezius, Muscles of tongue, Deltoid, Biceps brachii, Intercostal muscles, Thoracic diaphragm, Rectus abdominis, External oblique, Internal oblique, Transversus abdominis, Pelvic diaphragm, Gluteus maximus, Gluteus medius, Gluteus Minimus, Quadriceps femoris, Soleus.	08	CO2
III	Cardiovascular System & Respiratory System	Cardiovascular System Heart – size, location, chambers, exterior and interior, Blood supply of heart, Pericardium, Systemic and pulmonary circulation, Branches of aorta - common carotid artery, subclavian artery, Axillary artery, brachial artery, radial artery, superficial palmar arch, femoral artery, popliteal artery, dorsalis pedis artery., Peripheral pulse, Inferior vena cava, portal vein, portosystemic anastomosis, Great saphenous vein, median cubital vein, Dural venous sinuses, Lymphatic system – cisterna chyli and thoracic duct, Lymphatic tissues and its histology, Regional lymph nodes – cervical, axillary and inguinal lymph nodes. Respiratory System Parts of RS – nose, nasal cavity, paranasal air sinuses, larynx, trachea, lungs, pleura, bronchopulmonary segments, Histology of trachea and lungs.	08	CO3
IV	Gastro-Intestinal System Theory & Peritoneum	Gastro-Intestinal System Theory Parts of GIT- oral cavity (lip, cheek, tongue, salivary glands, palate, dentition) pharynx (Waldeyer's ring) esophagus, stomach, small and large intestine and appendix, Liver, gall bladder, pancreas and spleen, Histology of esophagus, stomach, small and large intestine, liver, gall bladder and pancreas. Peritoneum Description of reflection, folds and pouches in brief.	08	CO4

V	Urinary System & Reproductive System, Endocrine Glands	Urinary System Kidney, ureter, urinary bladder, male and female urethra, Histology of kidney, ureter and urinary bladder. Reproductive System Parts of male reproductive system- testis, vas deferens, epididymis, prostate, Parts of female reproductive system- uterus, fallopian tubes, ovary, mammary gland, Histology of testis, vas deferens, epididymis, prostate, uterus, fallopian tube and ovary. Endocrine Glands Names of all endocrine glands, describe in detail on pituitary gland, thyroid gland and parathyroid gland, suprarenal gland, Histology of pituitary, thyroid, parathyroid, suprarenal gland.	08	CO5
VI	Nervous System & Sensory Organs	Nervous System Neuron, Classification of nervous system, Cerebrum, cerebellum, brain stem, spinal cord & spinal nerve, Meninges, ventricles and cerebrospinal fluid, Blood supply of the brain, Cranial nerves (in brief), Nerve plexus (Brachial & lumbar) Sensory Organs Skin and its appendages, Eye – parts of eye ball and lacrimal apparatus, Extra- ocular muscles, Histology of cornea and retina, Ear – parts of ear- external, middle and inner ear and contents Embryology Spermatogenesis and oogenesis, Ovulation, fertilization, Placenta	08	CO6
Total			48	

SUGGESTED LEARNING RESOURCES

S.No.	Title of Book	Author	Publication
1	Human Anatomy, Vol.1,2 &3, 5th edition, 2010,	B.D. Chaurasia	CBS publishers & distributors Pvt. Ltd.
2	Physiology & Anatomy with Practical Considerations	Ester. M. Grishcimer	J.P. Lippincott. hiladelphia
3	Manipal Manual of Anatomy, 2nd edition, 2012	Sampath Madhyastha	CBS publishers& distributors Pvt. Ltd
4	Text Book of General Anatomy, 2 nd edition, 2013	Shobha Rawlani and Shivlal Rawlani	Jaypee brothers
5	Langman's Medical Embryology, 11th edition, 2009	T.W Sadler	Wolters Kluwer

	Course Articulation Matrix: (Mapping of Cos with Pos and PSOs)															
PO-PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3	PSO4
CO																
CO1	2	2	2	2	2	3	2	2	3	3	3	2	3	2	3	3
CO2	3	3	2	3	3	2	3	3	2	2	2	3	3	2	3	3
CO3	2	2	2	2	2	3	2	2	3	3	3	2	2	3	3	3
CO4	3	3	3	3	3	2	3	2	2	2	2	3	3	2	2	3
CO5	2	2	2	2	2	3	2	2	3	3	3	2	2	3	3	3
CO6	3	3	3	3	3	2	3	2	2	2	2	3	3	2	2	3
CO7	2	2	2	2	2	3	2	2	3	3	3	2	2	3	3	3

1- Low Correlation; 2- Moderate Correlation; 3- Substantial Correlation

Attributes & SDGs									
Course Code	Course Title	Attributes							SDG s No.
BMRIT001	Human Anatomy	Employability	Entrepreneurship	Skill Development	Gender Equality	Environment & Sustainability	Human Value	Professional Ethics	
		√	√	√	√		√	√	
									3,4



Integral University, Lucknow

Effective from Session: 2026-27							
Course Code	BMRIT002	Title of the Course	Physiology	L	T	P	C
Year	I	Semester	I	3	0	0	3
Pre-Requisite	Nil	Co-requisite	Nil				
Course Objectives	To ensure the knowledge of the function of systems and organs and their relationships and underpins the understanding of how various imaging modalities are to be selected depending upon the clinical history.						

Course Outcomes: At the end of the course students will be able to:	
CO1	Explain the normal functioning of organs and systems
CO2	Understand the interrelationships and interactions among various organs and systems for maintaining homeostasis.
CO3	Assess the relative contribution of each organ systems toward the maintenance of constant internal environment
CO4	Differentiate between normal and abnormal functioning of organs and systems.
CO5	Understand physiological basis of pathogenesis and treatment of diseases and disorders.
CO6	Apply the physiological basis in the field of allied health.

Unit No.	Title of the Unit	Topic and Contents	Contact Hrs.	Mapped CO
I	General physiology, Muscle nerve physiology & Blood	General physiology Introduction to Physiology, Concept of Homeostasis, cell – Morphology – Functions of organelles and Cell membrane, Transport mechanisms, Body fluid compartments. Muscle nerve physiology Neurons: Morphology, Action Potential, Neuroglia: Types & functions, Muscles: Types, structure of sarcomere. Neuromuscular junction, sliding filament mechanism of contraction. Blood Composition, properties, functions. Plasma proteins: Concentrations and functions, RBC: Morphology, functions, count, physiological variations and life span Erythropoiesis – stages, essential factors, regulation of Erythropoiesis, Hemoglobin: Functions, concentration, physiological variations. Fate of Hemoglobin – Jaundice, types, Color index, MCH, MCV, MCHC, PCV – normal values, WBC: Morphology, functions of all types including T & B lymphocytes, total and differential counts, physiological variations, Platelets: Morphology, count, functions, thrombocytopenia & bleeding time, Blood groups: Basis of blood grouping. Landsteiner's laws, ABO system, determination of blood groups, blood transfusion, complications of incompatible blood transfusion, Rh group, erythroblastosis foetalis, prevention and treatment, Blood bank. Haemostasias: Mechanisms. Clotting mechanism: factors, intrinsic and extrinsic pathways. Disorders of clotting – hemophilia, vitamin K deficiency. Anticoagulants – mechanism of action and their uses, Anemia: Classification – Morphological and Etiological, Blood volume: normal values.	10	CO1
II	Cardiovascular system	Cardiovascular system Organization of cardiovascular system, greater and lesser circulation, Physiological anatomy of the heart, nerve supply, Junctional tissues of heart (pacemaker), Cardiac cycle: Mechanical events, Heart sounds, causes, characteristics and significance, Normal ECG, clinical significance of ECG, Heart rate – Physiological variations, Cardiac output: Definitions, normal values, physiological variations, Arterial blood pressure: Definitions, normal values, physiological variations, factors maintaining blood pressure. Role of baroreceptors	10	CO2

		in regulation of blood pressure.		
III	Respiratory system	Respiratory system Respiratory and non-respiratory function of respiratory system. Physiological anatomy of respiratory system Functions of respiratory tract. Respiratory membrane. Respiratory muscles. Surfactant: functions, respiratory distress syndrome. Definitions of terms used in respiratory physiology: Eupnea, Hyperpnea, Tachypnea, Apnea, Dyspnea. Mechanics of breathing – intrapulmonary and Intrapleural pressure changes during a respiratory cycle. Spirometry – Lung volumes and capacities. Vital capacity. Oxygen transport: Role of hemoglobin, factors affecting, oxygen carrying capacity. Carbon dioxide transport: forms, chloride shift (Hamburger's phenomenon). Respiratory centers. Role of chemo receptors in regulation of respiration. Pulmonary ventilation and alveolar ventilation. Partial pressure of gases, Calculation of partial pressure of gasses in mixture. Arterial and venous blood gas concentrations and contents. Hypoxia: Types and effects Cyanosis, Asphyxia, Periodic Breathing, Acclimatization. Hyperbaric O2 therapy, Artificial respiration and Ventilators.	8	CO3
IV	Excretory system	Excretory system Functions of kidneys. Nephrons – Juxta glomerular apparatus – functions, Steps in Urine formation – Ultrafiltration, Tubular Reabsorption, Tubular Secretion, GFR. Definition, normal values, factors affecting GFR, measurement of GFR, Renal threshold for glucose, tubular load for glucose, Role of aldosterone and ADH in urine formation, Micturition, Innervation of bladder. Diuresis, Renal functions tests – Based on analysis of urine and analysis of blood, Skin: Functions of skin. Sweat glands.	4	CO4
V	Digestive system	Digestive system Introduction, structure of alimentary canal, Saliva: Composition, functions, Stomach: Functions. Gastric Juice: composition, functions, Pancreatic Juice: Composition and functions, Liver: Functions, Bile: composition, functions, Gall bladder: functions, Succusentericus: Composition, functions. Functions of large intestine, Movements of small intestines, Deglutition.	4	CO5

VI	Endocrine system Nervous system	Endocrine system Major endocrine glands- Hormone: Definition, Anterior pituitary: hormones and their functions, disorders – Gigantism, acromegaly, dwarfism, Posterior pituitary: Hormones – diabetes insipidus, Thyroid: Hormones, normal values, functions, role of TSH. Disorders: simple goitre, myxoedema, cretinism, Grave’s disease, Adrenal cortex: hormones, functions of cortisol and aldosterone. Addison’s disease, Cushing’s syndrome, Adrenal medulla: actions of adrenaline and noradrenaline, Endocrine pancreas: Insulin & glucagon, functions, Regulation of blood glucose level, diabetes mellitus, Parathyroid: Functions of PTH. Nervous system Synapse: Types, Transmission, Sensory receptors: Definition, Classification Organization of spinal cord, Functions of Dorsal column and Spinothalamic tract, Functions of Corticospinal tract, Reflex Action: Definition, reflex arc, Functions of Cerebellum, Basal ganglia, Thalamus, Hypothalamus, Cerebral cortex: Lobes & functions. EEG – Definition and uses, Autonomic nervous system: Organization & functions, Cerebrospinal fluid: Composition and function.	8	CO6
VII	Special senses & Reproductive system	Special senses Vision: Physiological anatomy of eye ball, rods & cones, Refractive errors: Myopia, hypermetropia, presbyopia & astigmatism, Audition: Functions of outer, middle & inner ear, cochlea, Deafness – types, Taste: Taste buds, primary taste sensation, Smell: Receptors, modalities of smell Reproductive system Male reproductive system: functions of testes, puberty, spermatogenesis functions of testosterone, semen, Female reproductive system: Ovarian hormones functions – Menstrual cycle, Hormonal basis of changes in menstrual cycle, Family Planning.	10	CO7
	Total		54	70

SUGGESTED LEARNING RESOURCES

S.No.	Title of Book	Author	Publication
1.	Foundation of Anatomy and Physiology	Ross Wilson	
2.	Physiology & Anatomy with Practical considerations	Ester. M. Grishcimer	
3.	Text Book of Physiology	A. P. Krishna	
4.	Text Book of Physiology	A.K. Jain	

PO-PSO CO	Course Articulation Matrix: (Mapping of Cos with Pos and PSOs)															
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3	PSO4
CO1	2	2	2	2	2	3	2	2	3	3	3	2	3	2	3	3
CO2	3	3	2	3	3	2	3	3	2	2	2	3	3	2	3	3
CO3	2	2	2	2	2	3	2	2	3	3	3	2	2	3	3	3
CO4	3	3	3	3	3	2	3	2	2	2	2	3	3	2	2	3
CO5	2	2	2	2	2	3	2	2	3	3	3	2	2	3	3	3
CO6	3	3	3	3	3	2	3	2	2	2	2	3	3	2	2	3
CO7	2	2	2	2	2	3	2	2	3	3	3	2	2	3	3	3

1- Low Correlation; 2- Moderate Correlation; 3- Substantial Correlation

Attributes & SDGs

Course Code	Course Title	Attributes							SDGs No.
BMRIT002	Physiology	Employability	Entrepreneurship	Skill Development	Gender Equality	Environment & Sustainability	Human Value	Professional Ethics	3,4
		√	√	√	√		√	√	



Integral University, Lucknow

Effective from Session: 2026-27							
Course Code	BMRIT003	Title of the Course	BASIC OF RADIATION PHYSICS	L	T	P	C
Year	I	Semester	I	2	0	6	5
Pre-Requisite	Nil	Co-requisite	Nil				
Course Objectives	To ensure the knowledge of basic concept of Physics of radiation Physics.						

Course Outcomes: At the end of the course students will be able to:	
CO1	Describe general physics related to imaging
CO2	Differentiate between within general radiation.
CO3	Identify construction of radiology equipment's.
CO4	Interpret quality of control of radiology equipment's
CO5	Differentiate between x-ray equipment's and other radiology related equipment's.
CO6	Describe production of x-rays
CO7	Describe circuit system of radiology equipment's

Unit No.	Title of the Unit	Topic and Contents	Contact Hrs.	Mapped CO
I	Basic concepts	Basic concepts: Units and measurements-Force, work, power and energy- Temperature and heat-SI units of above parameters. Atomic structure-atom model-Nucleus-electronic configuration-periodic table-Isotopes-Ionization- excitation-Binding energy-electron volt-Electromagnetic radiation-Quantum nature of radiation-mass energy equivalence-Fluorescence-electromagnetic spectrum.	5	CO1
II	Electricity and magnetism & Electromagnetic waves	Electricity and magnetism: Electric charges, Coulomb's law-Unit of charge- Electric potential, unit of potential-Electric induction, capacitance and Capacitors, series and parallel connection-electric current, unit, resistance, ohm's law, electric power, Joule's law. Varying currents-Growth and decay of current in LR circuit time constant, charge and discharge of a Capacitor through a resistance and inductance. Oscillations in an LC circuit. Alternating currents: Peak and RMS values and current and voltage, circuit containing LR, CR and LCR-Power factor, series and parallel LCR circuits, DC circuit, Ohm's law, resistivity, series and parallel combination, EMF, Kirchhoff's law, heating effect of current. Electromagnetic waves: Introduction, Maxwell's equation, electromagnetic waves, energy density and intensity, momentum, electromagnetic spectrum and radiation in Atmosphere.	6	CO2
III	Electronics	Electronics Semiconductors; Conduction in crystals, Energy bands. Intrinsic and Extrinsic semiconductors n-type and p-type semiconductors, majority and minority carriers. Semiconductor diodes: p-n junction-properties forward and reverse bias, characteristics of p-n junction Rectifiers-Half-wave and full wave, ripple factor, Efficiency of HW and FW rectifiers. Filter circuits; Zener diode, regulated power supply. Transistors-Symbols, Transistor connections and characteristics, Transistor as an amplifier, load line analysis, operating point, types of amplifiers-voltage and power amplifiers. Feedback-negative feedback in amplifiers.	5	CO3
IV	Discovery of x-rays-X-ray production and properties	Discovery of x-rays-X-ray production and properties: Bremsstrahlung Radiations-Characteristics X-Rays, factors affecting X-ray emission spectra, X-ray quality and quantity, HVL measurements, heel effect, soft and hard X-Rays, added and inherent filtration, reflection and transmission targets.	5	CO4
V	Heat	Heat Definition of heat, temperature, Heat capacity, specific heat capacity, Heat transfer-conduction, convection, radiation, thermal conductivity, equation for thermal conductivity (k), the value of k of various material of interest in radiology, thermal expansion, Newton's law of cooling, Heat radiation, perfect black body, Stefan law, application in Diagnostic Radiology (Heat dissipation in both stationary and rotating X-ray tubes).	4	CO5

VI	Interaction of ionizing radiation with matter	Interaction of ionizing radiation with matter -Types of interactions of X-and gamma radiation, Photoelectric & Compton, Pair production, annihilation radiation. Interaction of X and gamma rays: Transmission through matter, law of exponential attenuation, half value layer, and linear attenuation coefficient-coherent scattering- photonuclear disintegration-Particle interactions. Interactions of X rays and Gamma rays in the body; fat-soft tissue-bone-contrast media-total attenuation coefficient-relative clinical importance.	5	CO6
VII	Exponential attenuation & Physical quantity, its unit and measurement	Exponential attenuation (linear/mass attenuation coefficients), Half Value Thickness (HVT), Tenth Value Thickness (TVT), dependence on energy and atomic number. Radiation intensity and exposure, photon flux and energy flux density. LET, range of energy relationship for alpha, beta particles with X-Rays. Physical quantity, its unit and measurement: Fundamental and derived quantity, SI unit, various physical/radiation quantity used in Diagnostic Radiology and its unit (for example, KVP, mA, mAS, Heat unit.	6	CO7
Total			36	

SUGGESTED LEARNING RESOURCES

S.No.	Title of Book	Author	Publication
1.	Basic radiological physics	K. Thayala.	JaypeeBrothers Medical ublishers (P) Limited, 2003
2.	Textbook of Radiology and imaging- by David Sutton.	Curry and Dowdey	Wolters Kluwer
3.	X-Ray Equipment for Student	D.N and M.O Chesney	Blackwell Science Ltd
4.	A Textbook Of Radiation Physics for Radiologic Technology	Surendra Maharjan, Suraj Sah	Samiksha Publications
5.	A Concise Guide on Basic Radiographic Physics Darkroom Procedures, Radiographic Positioning & Techniques.	Lalit Agarwal	JBD Publication

Course Articulation Matrix: (Mapping of Cos with Pos and PSOs)																
PO-PSO CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3	PSO4
CO1	2	2	2	2	2	3	2	2	3	3	3	2	3	2	3	3
CO2	3	3	2	3	3	2	3	3	2	2	2	3	3	2	3	3
CO3	2	2	2	2	2	3	2	2	3	3	3	2	2	3	3	3
CO4	3	3	3	3	3	2	3	2	2	2	2	3	3	2	2	3
CO5	2	2	2	2	2	3	2	2	3	3	3	2	2	3	3	3
CO6	3	3	3	3	3	2	3	2	2	2	2	3	3	2	2	3
CO7	2	2	2	2	2	3	2	2	3	3	3	2	2	3	3	3

1- Low Correlation; 2- Moderate Correlation; 3- Substantial Correlation

Attributes & SDGs

Course Code	Course Title	Attributes							SDGs
BMRIT003	BASIC OF RADIATION PHYSICS	Employability	Entrepreneurship	Skill Development	Gender Equality	Environment & Sustainability	Human Value	Professional Ethics	No.
		√	√	√	√		√	√	3,4

SUGGESTED PRACTICALS/DEMONSTRATION

Sr. No	BMRIT003 BASIC OF RADIATION PHYSICS	Hours
1.	Basic concepts	108
2.	Electricity and magnetism, Electromagnetic waves	
3.	Electronics	
4.	Discovery of x-rays-X-ray production and properties	
5.	Heat	
6.	Interaction of ionizing radiation with matter-	
7.	Exponential attenuation, Physical quantity, its unit and measurement	
Total		108



Integral University, Lucknow

Effective from Session: 2026-27							
Course Code	BMRIT004	Title of the Course	Introduction to Healthcare	L	T	P	C
Year	I	Semester	I	1	0	0	1
Pre-Requisite	Nil	Co-requisite	Nil				
Course Objectives	The course provides the students a basic insight into the main features of Indian health care delivery system and how it compares with the other systems of the world..						

Unit No.	Title of the Unit	Topic and contents	Hours
I	Introduction to Health:	Introduction to Health: Definition of Health, Determinants of Health, Health indicators of India, Health team concept National Health Policy National Health Programs (Brief objectives and scope) Family welfare programs in India Introduction to Nursing: Nursing and Nursing principles, Interpersonal relationships, Bandaging basic turns, Bandaging extremities, Triangular bandages and their applications Nursing position, bed making, prone, <i>lateral</i>, dorsal, dorsal re-cumbent, Fowler's position, comfort measures, Aids, rest and sleep Lifting and transporting patients, transferring patients to wheel chair, transferring from bed to stretcher Bedside Management: Proper usage of bed pan, Observation of stools, urine, sputum. Understand the use and care of catheters. Enema procedures Method of giving nourishment: Feeding, tube feeding, drips, transfusion Monitoring and recording of vitals Simple aseptic techniques, sterilization and disinfection Observation of surgical dressings Concepts of First Aid	18

SUGGESTED LEARNING RESOURCES

S.No.	Title of Book	Author	Publication
1.	Principles and Practice of Nursing Management and Administration	Jogindra Vati.	Jaypee Brothers Ltd
2.	Textbook of Preventive and Social Medicine	K Park	Banarsidas Bhanot Publishers
3.	Introduction to Healthcare	Dakota Mitchell and Lee Haroun	Delmar
4.	Introduction to Healthcare and Careers	Roxann Delaet	Joanes and Bartlett Learning



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Effective from Session: 2026-27							
Course Code	BMRIT005	Title of the Course	Medical Terminology and Record Keeping	L	T	P	C
Year	I	Semester	I	1	0	0	1
Pre-Requisite	Nil	Co-requisite	Nil				
Course Objectives	The main objective of the course is to provide fundamental knowledge Medical Terminology and Record Keeping.						

Teaching Scheme (In Hours)				Total Credits (L+T+P)	Examination Scheme
L	T	P	C		Institute level exam only: The Institute level examination will be held before the commencement of the University examinations. A Pass in the subject with a minimum of 50 marks (50% of the total 100 marks) is compulsory in order to be eligible for the award of degree. These marks will not be considered for the award of class. Supplementary examination shall be conducted by the Institute for the benefit of unsuccessful candidates. Supplementary examinations will be conducted within six weeks/six months from the date of announcement of results.
1	--	--	1		

Unit No.	Title of the Unit	Topic and contents	Hours
I	Medical Terminology and Record Keeping	Topics include: origin, word building, abbreviations and symbols, terminology related to the human anatomy, reading medical orders and reports, and terminology specific to the student's field of study. Spelling is critical and will be counted when grading tests. Topics to be covered under the subject are as follows: 1. Derivation of medical terms. 2. Define word roots, prefixes, and suffixes. 3. Conventions for combined morphemes and the formation of plurals. 4. Basic medical terms. 5. Form medical terms utilizing roots, suffixes, prefixes, and combining roots. 6. Interpret basic medical abbreviations/symbols. 7. Utilize diagnostic, surgical, and procedural terms and abbreviations related to the integumentary system, musculoskeletal system, respiratory system, cardiovascular system, nervous system, and endocrine system. 8. Interpret medical orders/reports. 9. Data entry and management on electronic health record system.	18

SUGGESTED LEARNING RESOURCES

S.No.	Title of Book	Author	Publication
1.	Medical Terminology, Documentation, and Coding	Anne P. Stich	Routledge Publisher
2.	Medical Terminology for Health Professions	Ann Ehrlich, Carol L. Schroeder	Cengage Learning
3.	Medical Terminology	M. Masten Björk M.D. S. eloni	Medical Creations
4.	Medical Records: Organization and Management	GD Mogli (Author)	Jaypee Brothers Medical Publishers



Integral University, Lucknow

Effective from Session: 2026-27								
Course Code	BMRIT006	Title of the Course	Basic Computers and Information Science		L	T	P	C
Year	I	Semester	I		1	0	0	1
Pre-Requisite	Nil	Co-requisite	Nil					
Course Objectives	The students will be able to appreciate the role of computer technology							

Teaching Scheme (In Hours)				Total Credits (L+T+P)	Examination Scheme
L	T	P	C		Institute level exam only: The Institute level examination will be held before the commencement of the University examinations. A Pass in the subject with a minimum of 50 marks (50% of the total 100 marks) is compulsory in order to be eligible for the award of degree. These marks will not be considered for the award of class. Supplementary examination shall be conducted by the Institute for the benefit of unsuccessful candidates. Supplementary examinations will be conducted within six weeks/six months from the date of announcement of results.
1	--	--	1		

L, lecture; T, Tutorial; P, Practical

Unit No.	Title of the Unit	Topic and contents	Hours
I	Basic of Computers and Information Science	Topics to be covered under the subject are as follows: 1. Introduction to computer: Introduction, characteristics of computer, block diagram of computer, generations of computer, computer languages. 2. Input output devices: Input devices (keyboard, point and draw devices, data scanning devices, digitizer, electronic card reader, voice recognition devices, vision-input devices), output devices (monitors, pointers, plotters, screen image projector, voice response systems). 3. Processor and memory: The Central Processing Unit (CPU), main memory. 4. Storage Devices: Sequential and direct access devices, magnetic tape, magnetic disk, optical disk, mass storage devices. 5. Introduction of windows: History, features, desktop, taskbar, icons on the desktop, operation with folder, creating shortcuts, operation with windows (opening, closing, moving, resizing, minimizing and maximizing, etc.). 6. Introduction to MS-Word: introduction, components of a word window, creating, opening and inserting files, editing a document file, page setting and formatting the text, saving the document, spell checking, printing the document file, creating and editing of table, mail merge. 7. Introduction to Excel: introduction, about worksheet, entering information, saving workbooks and formatting, printing the worksheet, creating graphs 8. Introduction to power-point: introduction, creating and manipulating presentation, formatting and enhancing text, slide with graphs. 9. Introduction of Operating System: introduction, operating system concepts, types of operating system. 10. Computer networks: introduction, types of networks (LAN, MAN, WAN, Internet, Intranet), network topologies (star, ring, bus, mesh, tree, hybrid), components of network. 11. Internet and its Applications: definition, brief history, basic services (E-Mail, File Transfer Protocol, telnet, the World Wide Web (WWW)), www browsers, use of the internet. 8. Application of Computers in clinical settings. Practical on fundamentals of computers - 1. Learning to use MS office: MS word, MS PowerPoint, MS Excel. 2. To install different software. 3. Data entry efficiency	18

SUGGESTED LEARNING RESOURCES

S.No.	Title of Book	Author	Publication
1.	Basic of Computer and Information Technology	Ashok Arora	Vikas
2.	Computer and Information Science	Roger Lee (editor)	Springer
3.	Computer and Information Sciences	Tadeusz Czachórski, Erol Gelenbe, Krzysztof Grochla,	Springer
4.	Information science and computer basics: An Introduction	Mitchell, Ruth K	Clive Bingley



Integral University, Lucknow

Effective from Session: 2026-27							
Course Code	BMRIT007	Title of the Course	Medical Low and Ethics	L	T	P	C
Year	I	Semester	I	1	0	0	1
Pre-Requisite	Nil	Co-requisite	Nil				
Course Objectives	Learn about legal and ethical considerations						

Teaching Scheme (In Hours)				Total Credits (L+T+P)	Examination Scheme
L	T	P	C		Institute level exam only: The Institute level examination will be held before the commencement of the University examinations. A Pass in the subject with a minimum of 50 marks (50% of the total 100 marks) is compulsory in order to be eligible for the award of degree. These marks will not be considered for the award of class. Supplementary examination shall be conducted by the Institute for the benefit of unsuccessful candidates. Supplementary examinations will be conducted within six weeks/six months from the date of announcement of results.
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L, lecture; T, Tutorial; P, Practical

Unit No.	Title of the Unit	Topic and contents	Hours
I	Medical Low and Ethics	The important and relevant topics that need to focus on are as follows: 1. Medical ethics - Definition - Goal - Scope 2. Introduction to Code of conduct 3. Basic principles of medical ethics – Confidentiality 4. Malpractice and negligence - Rational and irrational drug therapy 5. Autonomy and informed consent - Right of patients 6. Care of the terminally ill- Euthanasia 7. Organ transplantation 8. Medico legal aspects of medical records – Medico legal case and type- Records and document related to MLC - ownership of medical records - Confidentiality	18
		9. Professional Indemnity insurance policy 10. Development of standardized protocol to avoid near miss or sentinel events 11. Obtaining an informed consent. 12. Medical ethics - Definition - Goal - Scope 13. Introduction to Code of conduct 14. Basic principles of medical ethics – Confidentiality 15. Malpractice and negligence - Rational and irrational drug therapy 16. Autonomy and informed consent - Right of patients 17. Care of the terminally ill- Euthanasia 18. Organ transplantation 19. Medico legal aspects of medical records – Medico legal case and type- Records and ownership of medical records - Confidentiality Privilege communication - Release of medical information - Unauthorized disclosure - retention of medical records - other various aspects. 20. Professional Indemnity insurance policy 21. Development of standardized protocol to avoid near miss or sentinel events 22. Obtaining an informed consent.	
		Privilege communication - Release of medical information – Unauthorized disclosure - retention of medical records - other various aspects.	

SUGGESTED LEARNING RESOURCES

S.No.	Title of Book	Author	Publication
1.	Medical Law and Ethics	Bonnie F. Fremgen	Pearson
2.	Medical Law and Ethics	Jonathan Herring	OUP UK
3.	Medical Law and Ethics	Purosottam Behera	Mittal Publications
4.	Reflections on Medical Law and Ethics in India	BismiGopalakrishnan, Mercy Khaute, B. Sandeepa Bhat	Eastern Law House



Integral University, Lucknow

Effective from Session: 2026-27							
Course Code	BMRIT008	Title of the Course	Professionalism and Values	L	T	P	C
Year	I	Semester	I	1	0	0	1
Pre-Requisite	Nil	Co-requisite	Nil				
Course Objectives	Learn about Professionalism and Values						

Teaching Scheme (In Hours)				Total Credits (L+T+P)	Examination Scheme
L	T	P	C	1	Institute level exam only: The Institute level examination will be held before the commencement of the University examinations. A Pass in the subject with a minimum of 50 marks (50% of the total 100 marks) is compulsory in order to be eligible for the award of degree. These marks will not be considered for the award of class. Supplementary examination shall be conducted by the Institute for the benefit of unsuccessful candidates. Supplementary examinations will be conducted within six weeks/six months from the date of announcement of results.
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L, lecture; T, Tutorial; P, Practical

Unit No.	Title of the Unit	Topic and contents	Hours
I	Professional values	1. Professional values- Integrity, Objectivity, Professional competence and due care, Confidentiality 2. Personal values- ethical or moral values 3. Attitude and behavior- professional behavior, treating people equally 4. Code of conduct, professional accountability and responsibility, misconduct 5. Differences between professions and importance of team efforts 6. Cultural issues in the healthcare environment	18

SUGGESTED LEARNING RESOURCES

S.No.	Title of Book	Author	Publication
1.	Textbook of Medical Ethics	Erich H Loewy	Springer
2.	Professionalism, Professional Values and Ethics in Nursing	Suresh K Sharma, Asha P Shetty	Jaypee Brothers Medical Publishers
3.	Essentials of Professionalism, Professional Values & Ethics for BSc Nursing Students	Varinder Kaur	CBS Publishers and Distributors Pvt. Ltd
4.	Textbook of Professional Ethics and Human Values	R S Naagarazan	New age International Publishers



Integral University, Lucknow

Effective from Session: 2026-27							
Course Code	BMRIT009	Title of the Course	Principals of Managements	L	T	P	C
Year	I	Semester	I	1	0	0	1
Pre-Requisite	Nil	Co-requisite	Nil				
Course Objectives	Learn about the basic Principals of Managements						

Teaching Scheme (In Hours)			Total Credits (L+T+P)	Examination Scheme
L	T	P	C	Institute level exam only: The Institute level examination will be held before the commencement of the University examinations. A Pass in the subject with a minimum of 50 marks (50% of the total 100 marks) is compulsory in order to be eligible for the award of degree. These marks will not be considered for the award of class. Supplementary examination shall be conducted by the Institute for the benefit of unsuccessful candidates. Supplementary examinations will be conducted within six weeks/six months from the date of announcement of results.
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Unit No.	Title of the Unit	Topic and contents	Hours
I	Principals of Managements	1. Introduction to management 2. Strategic Management 3. Foundations of Planning 4. Planning Tools and Techniques 5. Decision Making, conflict and stress management 6. Managing Change and Innovation 7. Understanding Groups and Teams 8. Leadership 9. Time Management 10. Cost and efficiency	18

SUGGESTED LEARNING RESOURCES

S.No.	Title of Book	Author	Publication
1.	Essentials of Professionalism, Professional Values & Ethics for BSc Nursing Students	Varinder Kaur	CBS Publishers and Distributors Pvt. Ltd
2.	Professionalism Professional Values and Ethics in Nursing	Suresh K Sharma	Jaypee Brothers
3.	Professionalism, Professional Values & Ethics	Shama Lohumi and Rakesh Lohumi	CBS publishers and Distributors PVT Ltd



Integral University, Lucknow

Effective from Session: 2026-27							
Course Code	BMRIT010	Title of the Course	English & Communication Skills	L	T	P	C
Year	I	Semester	I	1	0	0	1
Pre-Requisite	Nil	Co-requisite	Nil				
Course Objectives	Learn about English and Communication Skills.						

Teaching Scheme (In Hours)				Total Credits (L+T+P)	Examination Scheme
					Institute level exam only: The Institute level examination will be held before the commencement of the University examinations. A Pass in the subject with a minimum of 50 marks (50% of the total 100 marks) is compulsory in order to be eligible for the award of degree. These marks will not be considered for the award of class. Supplementary examination shall be conducted by the Institute for the benefit of unsuccessful candidates. Supplementary examinations will be conducted within six weeks/six months from the date of announcement of results.
L	T	P	C		
1	--	-	1		

L, lecture; T, Tutorial; P, Practical

Unit No.	Title of the Unit	Topic and contents	Hours
		writings Diary writing Reports on health problem etc. Official correspondence: Outgoing correspondence, replying incoming correspondence, writing circulars, notices, charge memos, note taking, writing summaries, observation reports. Teaching learning activities: Exercise on writing: Letter writing, resume/CV Essay writing. Assessment methods: Applications, short reports to be written. Content: English- Spoken mode, Debates, Telephonic conversation, formal & informal conversation: Agreeing emphasizing, interrupting, politely, opinions, interviews, visual presentation. Teaching learning activities: Participating in seminar, Telephonic conversation, conversation in different situations, practice in public speaking Assessment methods: Assessment of the skills based on the checklist. Content: Listening to comprehension media, audio, video, speeches, definition of listening, types of listening, purposes of listening, obstacles for listening, contexts of listening, to be a good listener, listening to a lecture etc. Teaching learning activities: Listening to audio, video tapes and identify the key points. Assessment methods: Practical test of listening and filling out the blanks, essay type.	18

S.No.	Title of Book	Author	Publication
1.	Communicative Nursing Students English for General	Tom Koorkkakala	K.J. Publications
2.	How to write and speak Better, Reader's	John Ellison Kahn	Reader's Digest Association
3.	Communication Development and Soft Skill	Ashwini Deshpande	Career Publications