LEARNING OUTCOME-BASED CURRICULUM

ACADEMIC PROGRAM: BACHELOR OF OCCUPATIONAL THERAPY

Prepared by:

Class teachers:

BOT 1st year: Ms Swati

BOT 2nd year: Mr Noor Mohamad

BOT 3rdyear: Ms Deepshikha Gupta

BOT 4th year: Ms Sheeba Parveen

BOT coordinator: Ms Shubha Arora

Mrs. Ruchi N.

Bukhshee Head:

Department of Occupational therapy

Name of the School: School of Nursing sciences and Allied

Health Vision statement (school level):

To create an institute of national and international repute in allied Health offering state of the art education entailing the finest skill combined with compassionate patient care.

Mission Statement (school level)

MS1: To provide the most advanced and comprehensive course offerings to the health science student possible by employing the most qualified faculty, utilizing the most advance technology,

MS2: To provide quality education and prepare human and competent global Allied health professional,

MS3: To provide highest level of quality patient care and can make contribution towards education and research,

Name of the Department: Department of Occupational therapy

Vision Statement (Department Level):

- The Vision of Occupational therapy Department is to nurture students into skilled and competent professionals, to meet the needs of diverse and global society and to promote healthy wellbeing and participate in meaning full activities and occupation by advance area of knowledge.

Mission statement (Departmental level):

- MS1: To emphasis experiential learning, evidence-based practice and clinical reasoning in students.
- MS2: To encourage high Quality research, imparting impactful teaching, research and industrial interaction to promote necessary competencies in students.
- MS3: To promote ethical and value based professional behavior among students.
- MS4: Fostering collaborative engagement and service that extend beyond campus to include local and global community.

Qualification Descriptors (QDs)

- QD-1: To impart knowledge and skills required for highly skilled and efficient occupational therapist who have a advance theoretical and practical knowledge through institutional and community based collaboration.
- QD-2: To demonstrate comprehensive knowledge and skills of occupational therapy for health and wellbeing. Evidence based practice and client centered approach is the core body of occupational therapy
- QD-3: To communicate and impart in-depth knowledge and skill to become competent occupational therapy professional, using advanced techniques and approaches.

- QD-4: To demonstrate and acquire skills for patients' management, research and teaching using various concepts, constructs and techniques.

- QD-5: To apply and practice moral and ethical values and evidence base practice with regard to occupational therapy

Mapping Qualification Descriptors (QDs) with Mission Statements

	MS-1	MS-2	MS-3	MS-4
QD-1	3	3	3	3
QD-2	3	3	2	3
QD-3	2	3	2	3
QD-4	3	3	2	3
QD-5	3	2	3	1

Grading: 3: High level Mapping
2: Medium level Mapping
1: Low level Mapping

Name of The School/ Department and Center:

School: School of Nursing Sciences and Allied Health

Department: Department of Occupational therapy

Name of academic Program: Bachelor of Occupational therapy

(BOT) PROGRAM LEARNING OUTCOMES (PLOS)

After completing the course, students should be able to:

PLO1: To apply and analyze occupational performance areas, components and context; plan/evaluate /implement interventions using remedial, adaptive, compensatory, consultative and educational approach.

PLO2: Identify and Explain the meaning & role of occupations and impact of health & environmental conditions on occupational performance of person, group and population.

PLO3: Effectively interact and communicate with client and the care team members in order to promote safe and needed services clinically.

PLO4: Evaluate, assess and identify the basic understanding of human body on structural, functional basis and also its relation with cellular complexity. They will also be able to relate functional performance and use clinical reasoning skills in problem solving anddevelop need-based strategies to address problems

PLO5: Apply appropriate advanced therapeutic activities and modalities for effective occupational therapy intervention to enhance ability of individual, group and communities to participate in purposeful occupational tasks

PLO6: Adhere to professional code of ethics, contribute to profession, participate in ongoing learning processes and create, maintain high standards of practice

PLO7: Demonstrate knowledge, attribute and appropriate skills in monitoring health related disorders, program and orient to provide preventive and rehabilitative services.

PLO8: Develop and apply skills in various disciplines like pediatrics, musculoskeletal, neurology, psychiatry, hand functions and geriatric etc... To acquire proper attitude of concerns for welfare and wellbeing of everyone specially differently abled person in community at large.

PLO9: Systematic understanding of biomechanical and pathophysiological principles to design/understand orthotic and prosthetic devices and to fabricate hand, upper limb and lower limb orthotics and self-help adaptations

PLO10: Demonstrate skills to Participate in research studies and identify correct evidenced based strategies and treatment of patients. They should have knowledge about computer skills to identify evidence-based practice and to analysis the results of research. They canapply the appropriate responsibilities as role of leader, supervisor and management in various situations

PLO11: Demonstrate the ability to acquire adequate knowledge of basic medical and surgical subjects to develop the skill of knowledge, techniques, activities of occupational therapy, as to work as rehabilitation team member to provide occupational therapy management of various medical and surgical conditions.

PLO12: Demonstrate the ability to acquire adequate knowledge of basic physiological. radiological, psychological and behavioral science knowledge equip students to develop critical thinking to work competently as part of multidisciplinary, interdisciplinary and transdisciplinary team member

PROGRAM SPECIFIC OBJECTIVES(PSOs)

After completing the course, students should be able to:

- **PSOs1.** Facilitate healing, relieve pain, prevent functional decline in acute and chronic illnesses. To improve functional abilities to promote health and wellbeing to optimize functional recovery in patients to effectively integrate them into society and to improve Quality of life

- **PSOs2**. Develop consultative role for health and family welfare services in exhibiting socioeconomic, political and cultural environment as a part of Community based rehabilitation.

- **PSO3.** Use job modification techniques based on Ergonomic principles and can modify work places effectively to achieve good quality of life for community
- **PSO4**. Demonstrate competency in occupational therapy intervention of patients in inpatient unit, intensive care units, outpatient unit etc to provide unique contribution of occupational therapy practice through biomedical and social science concepts.

Mapping of Program learning outcomes (PLOs) with Qualification Descriptors (QDs)

	QD1	QD2	QD3	QD4	QD5
PLO-1	3	3	3	3	2
PLO-2	3	3	3	3	2
PLO-3	3	3	3	3	3
PLO-4	3	3	3	3	2
PLO-5	3	3	3	3	2

PLO-6	2	3	3	3	3
PLO-7	2	3	3	3	2
PLO-8	3	3	3	3	2
PLO-9	2	3	3	3	2
PLO-10	3	3	3	3	2
PLO-11	3	3	3	3	2
PLO-12	2	3	3	3	3
PSO1	3	3	3	3	2
PSO-2	3	3	3	3	2
PSO-3	2	3	3	3	2
PSO-4	3	2	2	3	3

Grading: 3: High level Mapping
2: Medium level Mapping
1: Low level Mapping

BACHELOR OF OCCUPATIONAL THERAPY (BOT) 1ST YEAR

TYPICAL COURSE DESIGN

NAME OF THE SCHOOL / DEPARTMENT / CENTRE: SCHOOL OF NURSING SCIENCES AND ALLIED HEALTH/ DEPARTMENT OF OCCUPATIONAL THERAPY

Name of the Academic Program: BACHELOR OF OCCUPATIONAL THERAPY (BOT) 1ST YEAR

Course Code: BOT-161 & BOT-162 **Title of the Course**: ANATOMY (THEORY) & ANATOMY(PRACTICAL)

L-T-P 144 Hours (L) ; 80 Hours (P) Credits:
NA (L=Lecture hours, T=Tutorial hours, P=Practical hours)

COURSE LEARNING OUTCOMES (CLOs)

After completing this Course, the students should be able to …

CLO 1: To understand the general structure of a bone and list the functionsof its parts.
CLO-2: To understand and gain a total practical exposure of thestructure of human body.
CLO-3: To apply and define the anatomic terms used to refer to the body interms of directions andgeometric planes.
CLO-4: To analyze the major cavities of the body and the organs they contain.
CLO-5: To analyze the gross morphology, structure and functions of bones and variousorgans of the human body.
CLO-6: To create the use from the learnings of anatomy in the areas of patient care.

Mapping of Course Learning Outcomes (CLOs)with Program Learning Outcomes (PLOs) and Program Specific Outcomes (PSOs)

	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5	PLO 6	PLO 7	PLO 8	PLO 9	PLO 10	PLO 11	PLO 12	PSO 1	PSO 2	PSO 3	PSO 4
CLO1	1	1	1	3	2	1	1	1	1	2	2	2	1	1	1	1
CLO2	1	1	1	3	2	1	1	1	1	2	2	2	1	1	1	1
CLO3	1	1	1	1	3	1	1	3	1	1	1	3	1	1	1	1
CLO4	3	1	1	1	1	1	1	2	3	1	1	2	1	1	1	1
CLO5	3	1	1	1	1	1	1	2	3	1	1	2	1	1	1	1
CLO6	1	1	1	1	1	1	1	1	1	1	1	1	3	1	1	1

Grading: 3: High level Mapping
2: Medium level
Mapping 1: Low level
Mapping

DETAILED SYLLABUS:

BOT161: ANATOMY(THEORY) AND BOT 162: ANATOMY (PRACTICAL)

BOT161: ANATOMY(THEORY)

Unit 1: General Anatomy (10 HOURS)

- Subdivisions of anatomy: anatomical position & descriptive terms
- Skin, superficial fascia including contents, deep fascia including its modifications appendages of skin

- Muscles; classification parts, origin, tendon, aponeurosis, bursa, synovial sheath & ligaments
- Bone including ossification

- Blood vessels
- Lymphatic system
- Nervous system in general
- Joints in general and classification

Unit 2: Head & Neck (20 HOURS)

- Face
- Neck-posterior triangle, back of neck and sub occipital triangle
- Orbit and its contents
- Ant. Triangle and cervical fascia
- Thyroid and infra-temporal regions
- Temporo-mandibular joint muscles of mastication
- Pre-vertebral region and root of neck
- Lymph nodes of head and neck and blood vessels of neck
- Sympathetic trunk
- Oral cavity and tongue
- Pharynx and palate
- Nasal cavity and paranasal sinuses
- Larynx
- Ear
- Cranial nerves
- Joint of head and neck
- Bones-skull bones, mandible, cervical vertebrae, hyoid.

Unit 3: Upper limb (15 HOURS)

- Introduction & pectoral region
- Mammary gland
- Axilla: boundaries, contents, brachial plexus, axillary vessels & lymph nodes
- Back
- Shoulder region

- Shoulder joint, acromio-clavicular and sterno-clavicular joint
- Flexor and extensors compartments of arms
- Cubital fossa

- Flexor compartments of forearm and palm
- Extensor compartments of forearm
- Elbow and radio-ulnar joints
- Lymphatic's and venous drainage of upper limb
- Dermatomes and nerve injuries
- Bones-clavicle, scapula, humerus, radius, ulna, skeleton of hand

Thorax (15 HOURS)

- Thoracic wall, intercostal spaces
- Blood supply of thoracic wall
- Pleura and lungs
- Trachea, bronchi, mediastinum
- Diaphragm and respiratory movements
- Pericardium and heart
- Coronary circulation
- Autonomic nervous system
- Joints thorax
- Bones-sternum, ribs, thoracic vertebrae

Unit 4: Lower limb (15 HOURS)

- Introduction & front of thigh, femoral triangle, boundaries & its contents, femoral hernia
- Medial side of thigh and adductor canal
- Gluteal region, muscles, nerves and vessels
- Popliteal fossa, boundaries and contents
- Back of the thigh, hamstring muscles
- Hip joint
- Front of leg &dorsum of foot
- Lateral &medial side of leg
- Back of leg

- Sole
- Knee joint
- Ankle joint

- Tibio-fibular joint and small joints of foot
- Venous drainage &lymphatic drainage
- Nerves injuries
- Arches of foot
- Bones-hip bone, femur, patella, tibia, fibula and bones of foot

Unit 5 Abdomen and pelvis (15 HOURS)

- Anterior abdominal wall
- Rectus sheath
- Stomach
- Spleen and coeliac trunk
- Small and large intestines
- Duodenum
- Pancreas
- Livers and extra-hepatic biliary apparatus
- Kidney, ureter and suprarenal
- Posterior abdominal wall
- Perineum abdominal wall
- Perineum- superficial and deep perineal pouches
- Pelvis-urinary bladder
- Female genital organs; ovary, fallopian tube, uterus and vegina
- Rectum and anal canal
- Prostate, vas deference seminal vesicles
- Male urethra
- Blood vessel, nerves and muscles of pelvis
- Bones-lumber vertebrae, sacrum, male and female pelvis

Unit 6: Neuro-Anatomy (20 HOURS)

- Introduction, subdivision of nervous system and meninges
- Spinal cord; external and internal features, Spinal nerves and its nuclei, ascending and descending tracts, blood supply, lesions and their effects.
- Medulla oblongata; external and internal features, motor and sensory decussation, nuclei of cranial nerves, floor of the fourth ventricle, inferorbcerebral peduncle, blood supply and lesions
- Pons; external and internal features, sections through upper and lower pons, nuclei of cranial nerves; middle cerebellar peduncle; blood suppy and lesions.
- Cerebellum; subdivision, connections, white matter and nuclear masses, blood supply, functions and effects of lesions.
- Thalamic complex; dorsal thalamus, meta-thalamus, epithalamiums, sub thalamus, connections, functions, blood supply and lesions.
- Hypothalamus; nuclei, connections, functions, blood supply, third ventricle and applied anatomy.
- Cerebral hemispheres; functional areas, basal ganglion white matter, internal capsule, blood supply, lesions and lateral; ventricle.
- Cerebrospinal fluid; production, circulation, absorption, functions and applied anatomy
- Autonomic nervous system; sympathetic and parasympathetic components.
- Ascending and descending pathways.

Surface Anatomy (10 HOURS)

Important bony landmarks of the body, important vessels and nerves and projection of the outline of heart, its border, surfaces and valves, lungs, their borders, fissures and hila, pleura, and various abdominal and pelvic organs.

Radiological anatomy (4 HOURS)

Identification of normal anatomical features in commonly used ski-grams (plain & contrast).

Embryology (5 HOURS) **General embryology**

Introduction

- Oogenesis, ovarian cycle, uterine cycle.
- Spermatogenesis, spermatogenesis, sex determination, principles of family planning

First two weeks of development:

- Fertilization, cleavage & blastocyst formation

- Implantation, formation of decidua
- Formation of embryo blast and trophoblastic, bi-laminar germ disc.
- Amniotic sac; yolk sac, extra-embryonic mesoderm & extra-embryonic coelom; connecting stalk, chorion; formation of prochordal plate.

Third week of development

- Gastrulation; tri-laminar germ disc, formation of intra-embryonic mesoderm, notochord, establishment of body axis.
- Trophoblastic, secondary yolk sac, intra-embryonic coelom.

Third to eighth week of development: embryonic period

- Derivatives of ectoderm, endoderm and mesoderm
- Formation of somites, neural tube, folding of the embryo, establishment of the body form, formation of gut and its subdivisions.

Third month to birth: fetus and fetal membranes

- Development of fetus
- Placenta; formation, functions, features, types, circulation, placental barrier abnormalities
- Umbilical cord; amnion, amniotic fluid, its functions, amniocentesis

Histology: General histology (15 HOURS) Introduction: cell & microscope

Microscope and basic principles of microscopy, commonly used stains, basophilic and acidophilic staining reactions and their significance, commonly encountered artifacts.

Details structure of cell and its components and their functional mechanisms.

Epithelial tissue:

Microscopic characteristics of simple and stratified epithelium, functions & distribution glands: mucous, serous and mixed.

Connective tissue:

Classification: cells, fibers and their structural features and functions. Intercellular substances, amorphous ground substance, types of connective tissue (loose areolar tissue, dense connective tissue) and their distribution.

Cartilage:

Specialized connective tissue, different types of cartilages and their functions, ossification, regeneration and repair.

Bone:

Structural features of compact and cancellous bone, their distribution and functions, ossification, regeneration and repair.

Muscular tissue:

Structural and functional characteristics of skeletal, cardiac and smooth muscle.

Lymphoid tissue:

Structural and functional characteristics of lymph nodes, spleen, tonsil and thymus.

Blood vessels:

Conducting and distributing arties, arterioles, types of capillaries, their structural features and distribution, structural characteristics of large and small veins, lymphatic's and sinusoids.

Nervous tissue:

Structural characteristics of neuron, types of neurons and their structural and functional features and distribution, neuroglia: types, structure and functions, ganglia, peripheral nerves, myelination, degeneration and regeneration in peripheral nerves.

BOT162: ANATOMY(Practical)

Unit 1: (Lab hours) : 80 HOURS

Surface Anatomy:

Identification and Description of surface land marks on Human Specimen Muscles, bones, Ligaments, Joints of head, face, trunk, lower and upper extremities on a dissected human specimen. Gross and Microscopic Anatomy of the Central and Peripheral Nervous System. Gross anatomy of Respiratory, Digestive, Endocrine, Urinary and Reproductive Systems on a dissected human body.
Reading x-rays.

Reference Books:

1. C F V Smout; R J S McDowall (1962) Anatomy and physiology for students of physiotherapy, occupational therapy, and gymnastics, 4th ed, Edward Arnold, London, 493 pages.
2. David Cecil Sinclair (1970), Introduction to Functional Anatomy, 4Rev Ed edition, Blackwell Science Ltd, 560 pages
3. Katherine Fuller Wells (1976), Kinesiology: Scientific Basis of Human Motion, 6th Revised edition, Saunders (W.B.) Co Ltd; 575 pages
4. Bd Chaurasia(latest Publication date:October 19, 2021),BD Chaurasia's Human Anatomy: All 3 volumes, 8th edition ,CBS Publishers & Distributors Pvt Ltd, India; India, 372 pages

Teaching-Learning Strategies:

1. Learning through discussion among the peer group
2. Experiential Learning
3. Reflective Learning
4. Learning by doing group projects
5. Through Field Studies

Assessment methods and weightages:

- **Assessment methods**:

  Progress towards achievement of learning outcomes will be assessed using the following:

  - time-constrained examinations; closed-book test,
  - problem-based assignments: practical assignments, laboratory reports. Observation of practical skills;
  - individual project report (case study report); team project report; oral presentations, including seminar presentation; viva voce interviews; computerised adaptive testing; peer and self-assessment.

- **Weightage:**

  1.Total Weightage of the subject is of 100 marks. (25 Internal marks + 75 Annual examination marks)

  2.In order to pass a paper, a student has to secure at least 50% marks in that paper**.**

Name of the Academic Program: BACHELOR OF OCCUPATIONAL THERAPY (BOT) 1ST YEAR

Course Code: BOT-163 & BOT-164 **Title of the Course**: PHYSIOLOGY & BIOCHEMISTRY (THEORY) &PHYSIOLOGY & BIOCHEMISTRY (PRACTICAL)

L-T-P 144 Hours (L) ; 80 Hours (P) Credits:
NA (L=Lecture hours, T=Tutorial hours, P=Practical hours)

COURSE LEARNING OUTCOMES (CLOs)

After completing this Course, the students should be able to …

CLO 1: To remember and explain the structure and functions of each body system.
CLO 2: To understand the coordinated working pattern of different organs of each system.
CLO 3: To understand the concepts and principles of biochemistry andcell biology, including correlations of these with cellular and molecular processes involved in health and disease.
CLO 4: To apply and demonstrate the principle and working of various instruments used in humanphysiology.
CLO 5: To apply and perform haematological tests and also record bp,heart rate & pulse.
CLO 6: To analyse and evaluate the basic concepts of chemical reactions that occur in living systems.
CLO 7 : To evaluate the principles of hematological tests, recording blood pressure, heart rate, pulse and respiratory volumes.

Mapping of Course Learning Outcomes (CLOs)with Program Learning Outcomes (PLOs) and Program Specific Outcomes (PSOs)

	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5	PLO 6	PLO 7	PLO 8	PLO 9	PLO 10	PLO 11	PLO 12	PSO 1	PSO 2	PSO 3	PSO 4
CLO1	1	2	1	3	1	1	1	2	2	1	1	2	3	1	1	1
CLO2	1	2	1	3	1	1	1	2	2	1	1	2	3	1	1	1

CL	1	2	1	3	1	1	1	2	2	1	1	2	3	1	1	1

O3																
CLO4	2	1	1	3	3	1	2	1	3	1	1	3	1	1	1	1
CLO5	2	1	1	3	3	1	2	1	3	1	1	3	1	1	1	1
CLO6	2	1	1	3	3	1	2	1	3	1	1	3	1	1	1	1
CLO7	1	1	1	3	3	1	1	1	3	1	2	3	1	1	1	1

Grading: 3: High level Mapping
2: Medium level Mapping
1: Low level Mapping

DETAILED SYLLABUS:

B.O.T 163: PHYSIOLOGY & BIOCHEMISTRY (THEORY) & BOT 164: PHYSIOLOGY & BIOCHEMISTRY (PRACTICAL)

B.O.T 163: PHYSIOLOGY & BIOCHEMISTRY (THEORY)

Unit 1: Section I: A. Physiology (Theory) 112 hrs.

- Functions of organ systems in normal subjects.
- Various regulatory mechanisms and their integration in maintenance of homeostasis.
- Altered physiology on exposure to stress, during disease process to diagnose and manage it relevant to other specialties.
- The comparison of normal and abnormal data; interpret the same to assess heath status.
- Reproductive physiology as relevant to national family welfare program
- Basic laboratory investigations relevant for a rural setup
- Concept of professionalism
- The approaches to the patient with humanity and compassion.

General physiology (3 hrs.)

- Principles of homeostasis
- Structure of cell membrane
- Transport mechanisms
- Intercellular communications
- Fluid compartments of the body

Blood (5 hrs.)

- Composition and functions
- RBC-formation, functions, and anaemia's
- WBC-formation, function, and leukaemia's
- Haemoglobin-synthesis and functions
- Blood groups- basic of blood grouping, clinical importance, blood banking and transfusion
- Haemostasis, anticoagulants

Muscle and nerve physiology (11 hrs.)

- Structure and functions of neuron and neuralgia
- Molecular basic of resting membrane and action potential
- Transmission of nerve impulse
- Structure and transmission across neuro-muscular junction
- Neuro-muscular blocking agents
- Pathophysiology of myasthenia gravis
- Types and structure of muscle fiber
- Molecular basis of muscle contraction

Renal system (8 hrs.)

- Structure and function of nephron
- Urine formation involving processes of filtration, tubular absorption, secretion and concentration.

- Structure and function of Juxta glomerular apparatus
- Innervations of bladder, micturition, abnormalities of micturition

- Renal function test
- Body fluid and electrolyte balance

Digestive system (10 hrs.)

- Basic structure of digestive system
- Functions of
    - Salivary secretion
    - Gastric secretion
    - Pancreatic secretion
    - Intestinal secretion
    - Bile
    - Gastro-intestinal movements
    - Gastro-intestinal hormones=source, regulation and functions.

Endocrinology (10 hrs.)

- Physiological actions and effect of altered secretion of pituitary gland, thyroid gland, parathyroid gland, adrenal gland, pancreas and hypothalamus

Reproductive system (10 hrs.)

- Functions of testis & ovary and related hormones
- Spermatogenesis & factors influencing it
- Menstrual cycle-hormonal, uterine and ovarian changes
- Physiological basis for pubertal changes
- Contraceptive methods (male and female methods)
- Pregnancy and lactation

Cardiovascular system 12 hrs.)

- Properties of cardiac muscle
- Conducting system of heart, cardiac cycle

- Regulation of heart rate and blood pressure and cardiac output, normal ECG and shock
- Peripheral resistance and venous return

Respiratory system (12 hrs.)

- Functional anatomy, volumes and capacities
- Mechanism of normal respiration
- Regulation of respiration
- Transport of respiratory gases
- PFT
- Physiological changes with altitude and acclimatization
- Respiratory dysfunction- Obstructive/Restrictive pulmonary disorders

.

Central nervous system (18 hrs.)

- Organization of nervous system
- Functions and properties of synapse, reflex, receptors
- Functions of cortex, basal ganglia, thalamus, hypothalamus, cerebellum and limbic system, descending and ascending tracts
- Pain and referred pain
- Autonomic Nervous System

Special senses (7 hrs.)

- Functional anatomy of eye
- Physiology of image formation, color vision, refractive errors visual reflexes-pupillary and light reflex
- Functional anatomy ear
- Mechanism of hearing
- Perception of smell and taste sensation

Skin and body temperature regulation (2 hrs.)

- Mechanism of temperature regulation

Physiology of sports, exercise, yoga and meditation (4 hrs.)

- Cardio-respiratory and metabolic adjustments
- Physiological effects of yoga and meditation

Unit 2: Section II: B. BIOCHEMISTRY (32 hrs.)

- **Cell biochemistry (2 hrs.)**
  - Cell organelles

- **Carbohydrates (6 hrs.)**
  - Classification, dietary sugar
  - Glycolysis, TCA cycle, fate of dietary glucose
  - Abn of CHO metabolism

- **Lipids (4 hrs.)**
  - Composition, classification, EFA
  - Cholesterol, Lipoproteins,
  - Fate of dietary lipid, ketosis

- **Amino acids (1 hrs.)**
  - Classification, EEA, transamination

- **Proteins (4 hrs.)**
  - Classification, dietary proteins
  - Structure, denaturation, fate of dietary proteins
  - Removal of Co_2 and ammonia urea cycle

- **Tissue proteins (1 hrs.)**
  - Plasma proteins, muscles proteins

- **Enzymes (2 hrs.)**
  - Definition, proteins, iso-enzymes

- **Nutrition (3 hrs.)**
    - Balanced diet, calorific value

- Energy requirement

- **Vitamins (2 hrs.)**
  - Water soluble and fat soluble vitamins

- **Minerals Metabolism (2 hrs.)**
  - Calcium, Phosphate, Iron

- **Hormones (2 hrs.)**
  - Classification, Biochemical Roll

- **Nucleic acids (2 hrs.)**
  - RNA and DNA

- **Molecular biology (1 hrs.)**
  - Translation, transcription, genetic code, genetic disorders

BOT 164: PHYSIOLOGY & BIOCHEMISTRY (PRACTICAL)

Unit 1: Physiology (Lab hours -) 60 hrs.

- Haematology
  - RBC count
  - WBC count
  - Differential WBC count
  - Eosinophil count
  - Clotting and bleeding time
  - Blood grouping and cross matching
  - Interpret peripheral smear- identify abnormality and anaemia
  - Calculate various blood indices
- Mosso's finger Ergography

- Stethography
  - Effect of deglutination
  - Volume hyperventilation

- Clinical Examination
  - Respiration/CVS/higher Function/Memory/Time/Orientation/Reflexes/Motor and Sensory System/Abdomen
  - Cranial Nerves
- Blood pressure-effects of change in posture and exercise
- Electrocardiography (Demonstration)
- Vitalograph
- Reflexes

Unit 2: Clinical Biochemistry (lab hours) (6 hrs.)

- **Clinical Biochemistry I (6 Hrs.)**
  - Normal and abnormal urine, CSF (1 hrs.)
  - Routine blood investigations normal values (1 hrs.)
  - LFT, KFT, TFT, Lipid profile (2 hrs.)
  - Pancreas, muscles, heart and liver (2 hrs.)

- **Clinical Biochemistry II(14 Hrs.)**
  - Normal and abnormal urine, CSF (2 hrs.)
  - Plasma glucose GTT, G.t curve (2 hrs.)
  - Plasma protein (2 hrs.)
  - Plasma creatinine (2 hrs.)
  - Demo experiments enzymes assays (2 hrs.)
  - Na, K, Ca (2 hrs.)
  - Spotting (2 hrs.)

Reference Books:

1. S. Ramakrishnan (2001), Textbook of Medical Biochemistry, Third edition , Orient BlackSwan Publications, India, 722 pages.

2. Bijlani (2010), Understanding Medical Physiology A Textbook For Medical Students, 4th edition, Jaypee Brothers Medical Publishers, India, 850 pages
3. K.Semubulingam & Prema Sembulingam, (1 January 2019) Essentials of Medical Physiology, Eight edition ,Jaypee Brothers Medical Publishers; India, 1186 pages

Teaching-Learning Strategies:

1. Learning through discussion among the peer group
2. Experiential Learning
3. Reflective Learning
4. Learning by doing group projects
5. Through Field Studies

Assessment methods and weightages:

- **Assessment methods**:

  Progress towards achievement of learning outcomes will be assessed using the following:

  - time-constrained examinations; closed-book test,
  - problem-based assignments: practical assignments, laboratory reports. Observation of practical skills;
  - individual project report (case study report); team project report; oral presentations, including seminar presentation; viva voce interviews; computerised adaptive testing; peer and self-assessment.

- **Weightage:**

  1.Total Weightage of the subject is of 100 marks. (25 Internal marks + 75 Annual examination marks)
  2.In order to pass a paper, a student has to secure at least 50% marks in that paper**.**

Name of the Academic Program : BACHELOR OF OCCUPATIONAL THERAPY (BOT) 1ST YEAR

Course Code: BOT-165 **Title of the Course**: SOCIOLOGY (THEORY)

L-T-P: 64 Hours (L) Credits: NA

(L=Lecture hours, T=Tutorial hours, P=Practical hours)

COURSE LEARNING OUTCOMES (CLOs)

After completing this Course, the students should be able to …

CLO 1: To understand the discipline and basic concept in sociology and social structure.
CLO 2: To understand an introduction of social structure & socialchange.
CLO 3: To apply basic knowledgeof social structure and social life to relate the therapeutic situations in occupational therapy.
CLO 4: To analyze social issues and are empowered to face social problems.
CLO 5: To analyze the social institutions in relation to the individual, family & community, socio-cultural factors as determinants of health & the behavior in health & sickness

Mapping of Course Learning Outcomes (CLOs)with Program Learning Outcomes (PLOs) and Program Specific Outcomes (PSOs)

	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5	PLO 6	PLO 7	PLO 8	PLO 9	PLO 10	PLO 11	PLO 12	PSO 1	PSO 2	PSO 3	PSO 4
CLO1	2	2	2	1	1	1	1	1	1	2	1	2	3	3	1	1
CLO2	2	2	2	1	1	1	1	1	1	2	1	2	3	3	1	1

CLO3	2	2	2	1	3	1	1	1	1	2	1	2	3	3	1	1
CLO4	2	2	2	1	3	2	1	1	1	2	1	2	3	3	1	1
CLO5	2	2	2	1	3	2	1	1	1	2	1	2	3	3	1	1

Grading: 3: High level Mapping
2: Medium level Mapping
1: Low level Mapping

Detailed Syllabus:

BOT 165 SOCIOLOGY(THEORY)

Unit 1: I **Introduction (1 hrs.)**

Introduction of the basic concepts of sociology & social process. Social institutions (in relation to the individual, family & community), socio-cultural factors as determinants of health & the behaviour in health & sickness will also be introduced which will allow the student to relate the above to therapeutic situations in Occupational Therapy.

Definitions of sociology, sociology as a science of society, uses of the study of sociology, application of knowledge of sociology in physiotherapy and occupational therapy.

Unit 2: Sociology and Health (4 hrs.)

Social factors affecting health status, social consciousness and perception of illness, social consciousness and meaning of illness, decision making in taking treatment. Institutions of health, their role in the improvement of the health of the people.

Socialization (5 hrs.)

Meaning of socialization, influence of social factor on personality, socialization in hospitals, and socialization in the rehabilitation of patients.

Social Groups - Concept of social groups, influence of formal and informal groups on health and sickness, the role of primary groups and secondary groups in the hospitals and rehabilitation settings.

Family (4 hrs.)

Influence of family on human personality, discussion of chores in the functions of a family on the individual's health, family and nutrition, the effects of

sickness on family, and psychosomatic disease.

Unit 3: Community (4 hrs.)

Concept of community, role of rural and urban communities in public health, role of community in determining beliefs, practices and home remedies in treatment.

Culture (4 hrs.)

Components of culture, impact of culture on human behaviour, cultural meaning of sickness, response of sickness and choice of treatment (role of culture as social consciousness in moulding the perception of reality), culture induced symptoms and disease, sub-culture of medical workers.

Caste System (2 hrs.)

Features of the modern caste system and its trends.

Unit 4: Social Change (3 hrs.)

Meaning of social change, factors of social change, human adaptation and social change, social change and stress, social change and deviance, social change and health programs, the role of social planning in the improvement of health and in rehabilitation.

Social Control (2 hrs.)

Meaning of social control, role of norms, folkways, customs, morals, religion law and other means of social control in the regulation of human behavior, social deviance and disease.

Roles (2 hrs.)

Role taking and making, concepts of role, multiple roles, role set, role conflicts, roll loss and transition, roles and health.

Unit 5 Organization (8 hrs.)

Goals and functions, organization as systems, organizational impact-individual, family community, social structure, power and control in organizations, feminist perspectives on organizations.

Sex, gender and feminism (2 hrs.)

Social construction of sex and gender, sex / gender roles, feminist critiques of sociology.

Work (2 hrs.)

Work, culture and work, theories of work, unemployment, women and work.

Unit 6: Leisure (4 hrs.)

Leisure, conceptual and methodological

Social Problems of the Disabled (10 hrs.)

Consequences of the following social problems in relation to sickness and disability, remedies to prevent the following problems: Population explosion,

Poverty and unemployment, Beggary, Juvenile delinquency, Prostitution, Alcoholism, Problems of women in employment.

Sociology of the health profession. (2 hrs.)

Various perspectives, power and autonomy in professions , women and professions.

Unit 7: Social Security (3 hrs.)

Social security and social legislation in relation to the disabled.

Social Worker (2 hrs.)

The role of a medical social worker

Reference Books:

1.D.R . Sachdeva Vidya Bhushan (latest publication: 22nd November 2020), An Introduction to Sociology, 48th edition ,Kitab Mahal; (22 November 2020), India, 564 pages

Teaching-Learning Strategies:

1. Learning through discussion among the peer group
2. Experiential Learning
3. Reflective Learning
4. Learning by doing group projects
5. Through Field Studies

Assessment methods and weightages:

- **Assessment methods**:

  Progress towards achievement of learning outcomes will be assessed using the following:

  - time-constrained examinations; closed-book test,
  - problem-based assignments: practical assignments, laboratory reports. Observation of practical skills;
  - individual project report (case study report); team project report; oral presentations, including seminar presentation; viva voce interviews; computerised adaptive testing; peer and self-assessment.

- **Weightage:**
  1. Total Weightage of the subject is of 100 marks. (25 Internal marks + 75 Annual examination marks)

2. In order to pass a paper, a student has to secure at least 50% marks in that paper**.**

Name of the Academic Program: BACHELOR OF OCCUPATIONAL THERAPY (BOT) 1ST YEAR

Course Code: BOT-166 & BOT-167 **Title of the Course**: FUNDAMENTAL OF OCCUPATIONAL THERAPY I (THEORY) & FUNDAMENTAL OF OCCUPATIONAL THERAPY I (PRACTICAL)

L-T-P 128 Hours (L) ; 112 (P) Credits:
NA (L=Lecture hours, T=Tutorial hours, P=Practical hours)

COURSE LEARNING OUTCOMES (CLOs)

After completing this Course, the students should be able to …

CLO 1: To understand and appreciate the role of occupational performance forthe promotion of health and wellbeing.

CLO 2: To understand the importance of the history and philosophical base of the profession ofoccupational therapy.

CLO 3: To apply the occupational therapy foundations and concepts in assessment and interventionin various occupational practice settings and across lifespan within a broad continuum of care.

CLO 4: To analyse management and leadership skills in various occupational therapy practice settings.

CLO 5: To evaluate and assess occupation and its determinants as well as use occupation as a means to improve health and well-being of communities.

CLO 6: To create the use meaningful activities in promotion of health & lessen disabilities.

Mapping of Course Learning Outcomes (CLOs)with Program Learning Outcomes (PLOs) and Program Specific Outcomes (PSOs)

	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5	PLO 6	PLO 7	PLO 8	PLO 9	PLO 10	PLO 11	PLO 12	PSO 1	PSO 2	PSO 3	PSO 4
CLO1	3	3	3	1	2	2	1	2	1	1	1	1	3	1	1	1
CLO2	3	3	3	1	2	2	1	2	1	1	1	1	3	1	1	1

CLO3	3	3	3	1	2	2	1	2	1	1	1	1	3	1	1	1
CLO4	3	3	3	1	2	2	3	2	1	3	1	1	3	1	1	1
CLO5	3	3	3	1	2	2	3	2	1	3	1	1	3	1	1	1
CLO6	3	3	3	1	2	2	3	2	1	3	1	1	3	1	1	1

Grading: 3: High level Mapping
2: Medium level Mapping
1: Low level Mapping

Detailed Syllabus:

BOT 166 FUNDAMENTALS OF OCCUPATIONAL-I(THERAPY)& BOT 167 FUNDAMENTALS OF OCCUPATIONAL THERAPY-I (PRACTICAL)

BOT 166 FUNDAMENTALS OF OCCUPATIONAL-I(THERAPY)

Unit 1: Introduction (8 hrs.)

Definition & Role of Occupational Therapy.
History & Development of Occupational Therapy.

Unit 2: Assessment & Evaluation, (6 hrs.)

Functions of evaluations, evaluative approaches types of assessments /evaluations, process of evaluation (data collection, interpretation & validation), the interview process, types of measurement tools.

Unit 3: Identification Data (5 hrs.) (including the importance of socioeconomic status), History taking, Chief complaints and other general points of evaluation (mental status, observation / inspection / palpation / testing)

Unit 4: Definitions, Classification / Components, Assessments (including brief description of standardized / non- standardized & acceptable tests) of O.T. Performance Components

- **Sensorimotor component.**
  - Sensory Testing (6 hrs.)
  - Perception (6 hrs.)
  - Neuromuscular skeletal
    - Joint Range of Motion (12 hrs.)
    - Muscle strength, power & endurance (12 hrs.)
    - Muscle tone (4 hrs.)
    - Postural control & alignment (5 hrs.)
    - Reflex assessment (DTR's, superficial reflexes, Development reflexes) (12 hrs.)
    - Anthropometric characteristics (6 hrs.)
    - Limb Length
    - Edema
    - Stump
    - Muscle bulk
    - Soft tissue examination (end feels, capsular & non - capsular patterns, contractures & deformities)

Unit 5 Cranial nerve (6 hrs.)

- **Unit 6:** Motor
  - Co-ordination (gross motor & fine motor / dexterity) (6 hrs.)
  - Bilateral integration & laterality (1 hrs.)
  - Visual-motor integration (1 hrs.)
  - Oral – motor control (5 hrs.)
  - Hand functions – (Jebson Taylor, Purdue Peg Board, MRMT) (8 hrs.)

- Cognition (8 hrs.)
- Psychosocial (6 hrs.)

a. Psychological functions

i. Dynamic states (needs, emotions, values, interest, motivation)
ii. Intra-psychic dynamics (conscious – unconscious continuum, psychodynamics, defense mechanisms)
iii. Reality testing, insight, object relations, self –concept, self – discipline, concept of others

b. Social Interaction, interpretation of situations, social skills, structured social interplay. Sequence of evaluation (5 hrs.)

BOT 167 FUNDAMENTALS OF OCCUPATIONAL THERAPY-I (PRACTICAL)

Unit 1: Knowledge of various assessment methods and their demonstrations on models for the topics covered in theory. (112 hrs)

Reference Books:

1.Helen S. Willard (Editor), Clare S. Spackman (Editor), H.L. Hopkins H.D. Smith (1993), Willard & Speckman Occupational Therapy, 8th edition ,Lippincott Williams and Wilkins; USA, 976 pages.
2. Turner, Ann; Foster, Margaret,(1992), Occupational Therapy and Physical Dysfunction: Principles, Skills and Practice, Third Edition, Churchill Livingstone Publications, UK
3. Lorraine Williams Pedretti,(1996) Occupational Therapy: Practice Skills for Physical Dysfunction, 4th edition, Mosby Publications, UK, 896 pages
4. GARDINER M.D. (2005), THE PRINCIPLES OF EXERCISE THERAPY DENA GARDINER, 4TH EDITION, Ss venture Publications
5. Florence Peterson Kendall , Elizabeth Kendall McCreary ,Patricia Geise Provance , Mary McIntyre Rodgers, William Anthony Romani , (March 4, 2005), Muscles: Testing and Testing and Function with Posture and Pain (Kendall, Muscles), Fifth, North American edition, LWW Publications, USA, 560 pages
6. Catherine Anne Trombly ,1983, Occupational therapy for physical dysfunction , 2nd edition , Williams & Wilkins; (January 1, 1983), USA, 512 pages
7. Cynthia C. Norkin ,D. Joyce White,June 24, 2009, Measurement of Joint Motion : A Guide to Goniometry, 4th edition, F.A. Davis Company, 464 pages
8. Carolyn Kisner PT MS, Lynn Allen Colby PT MS , John Borstad PT PhD , Therapeutic Exercise: Foundations and Techniques (Therapeudic Exercise: Foundations and Techniques) Seventh Edition, F.A. Davis Company;1128 pages

Teaching-Learning Strategies in brief :

1. Learning through discussion among the peer group
2. Experiential Learning
3. Reflective Learning
4. Learning by doing group projects

5. Through Field Studies

Assessment methods and weightages:

- **Assessment methods**:

  Progress towards achievement of learning outcomes will be assessed using the following:

  - time-constrained examinations; closed-book test.
  - problem-based assignments: practical assignments, laboratory reports. Observation of practical skills.
  - individual project report (case study report); team project report; oral presentations, including seminar presentation; viva voce interviews; computerised adaptive testing; peer and self-assessment.

- **Weightage:**

  1.Total Weightage of the subject is of 100 marks. (25 Internal marks + 75 Annual examination marks)

  2.In order to pass a paper, a student has to secure at least 50% marks in that paper**.**

Name of the Academic Program : BACHELOR OF OCCUPATIONAL THERAPY (BOT) 1ST YEAR

Course Code: BOT-168 & BOT-169 **Title of the Course**: FUNDAMENTAL OF OCCUPATIONAL THERAPY II (THEORY) & FUNDAMENTAL OF OCCUPATIONAL THERAPY II (PRACTICAL)

L-T-P 128 Hours (L) ; 112 (P) Credits:
NA (L=Lecture hours, T=Tutorial hours, P=Practical hours)

COURSE LEARNING OUTCOMES (CLOs)

After completing this Course, the students should be able to …

CLO 1: To understand the meaning and role of occupations and impact of health and environmental conditions on occupationalperformance of persons, groups, and populations.

CLO 2: To understand & explain the meaning anddynamics of occupation and activity, including theinteraction of areas of occupation, performance skills, performance patterns,activity demands, context(s) and environments, and client factors.

CLO 3: To apply and demonstrate basic skill in activity analysis and its role in therapeutic activity selection and implementation.

CLO 4: To apply and acquire knowledge in using therapeutic techniques in training adl (activities of daily living) to help them to line independently.

CLO 5: To analyse and demonstrate task analysis inthe areas of occupation, performance skills,performance patterns, activity demands, context(s), and environments, and clientfactors to formulate an intervention plan.

Mapping of Course Learning Outcomes (CLOs)with Program Learning Outcomes (PLOs) and Program Specific Outcomes (PSOs)

	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5	PLO 6	PLO 7	PLO 8	PLO 9	PLO 10	PLO 11	PLO 12	PSO 1	PSO 2	PSO 3	PSO 4
CLO1	3	3	3	1	1	2	3	3	3	3	3	1	3	1	1	1

CLO2	3	3	3	1	1	2	3	3	3	3	3	1	3	1	1	1

CLO3	3	3	3	1	1	2	3	3	3	3	3	1	3	1	1	1
CLO4	3	3	3	1	1	2	3	3	3	3	3	1	3	1	1	1
CLO5	**3**	3	3	1	1	2	3	3	3	3	3	1	3	1	1	1

Grading: 3: High level Mapping
2: Medium level Mapping
1: Low level Mapping

Detailed Syllabus:

BOT 168 FUNDAMENTALS OF OCCUPATIONAL-II(THEORY)&BOT 169 FUNDAMENTALS OF OCCUPATIONAL THERAPY-II (PRACTICAL)

BOT 168 FUNDAMENTALS OF OCCUPATIONAL-II(THEORY)

Unit 1: <u>Application of Occupational Therapy in: (10 hrs.)</u>

- General Medical & Surgical Conditions.
- Psychiatric conditions
- Mentally backward &subnormal
- Orthopaedic condition/disorders
- Paediatrics
- Geriatrics
- Hearing & Visual Impairment
- Cardiopulmonary conditions
- Neurological conditions
- Leprosy

Unit 2: <u>Environments for Practice (10 hrs.)</u>

- Acute Care
- Rehabilitation Center
- Occupational Therapy in the School System
- Adult Day Care
- Long - Term Care
- Home care & Private Practice
- Wellness Program
- Hospice Care

Unit 3: <u>Basic concepts of human development (13 hrs.)</u>

- Aspects of human development: physical, motor, sensory cognitive, emotional, cultural, social.
- Factors influencing human development: Biological environment.
- Principles of Maturation.

Unit 4: <u>Human Development Process (17 hrs.)</u>

- Posture and movements
- Spatiotemporal adaptation
- Sensory - motor - sensory Integration
- Reflex and reaction maturation
- Stability & mobility development
- Theories
    - Learning Theory
    - Behavioral Theory
    - Social learning Theory
    - Maturation Theory of Arnold Gesell

- Psychoanalytic theory of Freud, Erik Erikson
- Cognitive Theory of Jean Piaget
- Humanistic Self-Theory

Unit 5 Definitions, Classification / Components, Assessments / Evaluations (Including brief description of standardized / non- standardized & acceptable tests) of

- Performance Areas
  - ADL, Personal care, medication routine & health maintenance, Functional & community mobility, Functional communication, Sexual expression (15 hrs.)
  - Work and Productive Activities (15 hrs.)
    - FCE, WCE, PCE – work assessments
    - Work evaluation tools such as: on – the – job, or work site evaluations situational assessments psychometric instruments work samples) Driving evaluation Home management Educational activities.
    - Play / Leisure Activities (15 hrs.)
  - Functions of Play
    - Social
    - Physical
    - Sensory
    - Emotional
    - Perceptual
    - Cognitive
  - Content and structure of play
  - Theories of play
    - Erikson
    - Freud
    - Piaget
    - Reilly
  - Role of play in Occupational Therapy process

- Performance Contexts (10 hrs.)
  - Environmental context (physical, social, cultural)

- Temporal aspects (chronological, developmental, life cycle, disability status)

Unit 6

Activity Analysis: (7 Hrs).

- Principles of activity analysis
- Biomechanical & sensory motor
- Adapting & grading activity
- Selection of

activity Activity analysis for (6 Hrs.)

- Crafts
- Job related activities
- Functional

activities Therapeutic values of (10 Hrs)

- OT Equipment's
- Tools

BOT 169 FUNDAMENTALS OF OCCUPATIONAL THERAPY-II (PRACTICAL)

Unit 1: Knowledge of various assessment methods and their demonstration on models /clients in the following areas:(112 hrs.)

A.D.L.
Work and Productive activities Play / Leisure
Performance context
Environmental context
Temporal aspects

Reference Books:

1. Helen S. Willard (Editor), Clare S. Spackman (Editor), H.L. Hopkins H.D. Smith (1993), Willard & Speckman Occupational Therapy, 8th edition ,Lippincott Williams and Wilkins; USA, 976 pages.
2. Turner, Ann; Foster, Margaret,(1992), Occupational Therapy and Physical Dysfunction: Principles, Skills and Practice, Third Edition, Churchill Livingstone Publications, UK
3. Lorraine Williams Pedretti,(1996) Occupational Therapy: Practice Skills for Physical Dysfunction, 4th edition, Mosby Publications, UK, 896 pages
4. Catherine Anne Trombly ,1983, Occupational therapy for physical dysfunction , 2nd edition , Williams & Wilkins; (January 1, 1983), USA, 512 pages

Teaching-Learning Strategies :

1. Learning through discussion among the peer group
2. Experiential Learning
3. Reflective Learning
4. Learning by doing group projects
5. Through Field Studies

Assessment methods and weightages:

- **Assessment methods**:

  Progress towards achievement of learning outcomes will be assessed using the following:

  - time-constrained examinations; closed-book test.
  - problem-based assignments: practical assignments, laboratory reports. Observation of practical skills.
  - individual project report (case study report); team project report; oral presentations, including seminar presentation; viva voce interviews; computerised adaptive testing; peer and self-assessment.

- **Weightage:**

  1.Total Weightage of the subject is of 100 marks. (25 Internal marks + 75 Annual examination marks) 2.In order to pass a paper, a student has to secure at least 50% marks in that paper**.**

Name of the Academic Program : BACHELOR OF OCCUPATIONAL THERAPY (BOT) 1ST YEAR

Course Code: BOT-170 **Title of the Course**: ENVIRONMENTAL STUDIES *Qualifying Subject

L-T-P :48 Hours (L) Credits: NA
(L=Lecture hours, T=Tutorial hours, P=Practical hours)

COURSE LEARNING OUTCOMES (CLOs)

After completing this Course, the students should be able to …

CLO 1: To remember and understand the physical, chemical, and biological components of the earth's systems and show how they function.

CLO 2: To understand the basic concept of multi-disciplinary nature of the environment, natural resources, biodiversity, ecosystem and threats to ecosystem e.g., pollution.

CLO 3: To analyse the transnational character of environmentalproblems and ways of addressing them, including interactions across local to global scales.

CLO 4: To apply systems, concepts and methodologies in analysing the interactions between social and environmental processes.

CLO 5:To apply the concepts and methods from ecological and physical sciences in environmental problem solving..

Mapping of Course Learning Outcomes (CLOs)with Program Learning Outcomes (PLOs) and Program Specific Outcomes (PSOs)

	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5	PLO 6	PLO 7	PLO 8	PLO 9	PLO 10	PLO 11	PLO 12	PSO 1	PSO 2	PSO 3	PSO 4
CLO1	1	3	3	1	1	1	1	2	1	1	1	1	1	1	3	1

CLO2	1	3	3	1	1	1	1	2	1	1	1	1	1	1	3	1
CLO3	1	3	3	1	1	1	1	2	1	1	1	1	1	1	3	1
CLO4	1	3	3	1	1	1	1	2	1	1	1	1	1	1	3	1
CLO5	1	3	3	1	1	1	1	2	1	1	1	1	1	1	3	1

Grading: 3: High level Mapping
2: Medium level Mapping
1: Low level Mapping

Detailed Syllabus:

BOT 170 ENVIRONMENTAL STUDIES(THORY)

Unit 1:

The Multidisciplinary Nature of Environmental Studies (5 hrs.)

- Definition, scope and importance**.**
- Need for public awareness**.**

Natural Resources (5 hrs.)

- Renewable and non-renewable resources:
- Natural resources and associated problems.
  - Forest resources: Use and over-exploitation, deforestation, case studies. Timber extraction, mining, dams and their effects on forests and tribal people.
  - Water resources: Use Andover-utilization of surface and ground water, floods, drought, conflicts over water, dam's benefits and problems.
  - Mineral resources: Use and exploitation, environmental effects of extracting and using mineral resources, case studies.
  - Food resources: world food problems, changes caused by agriculture and overgrazing, effects of modern agriculture, fertilizer-pesticide problems, water logging, salinity, case studies.

- Energy resources: growing energy needs, renewable and non-renewable energy sources use of alternate energy sources. Cast studies.

- Land resources: Land as a resource, land degradation, man induced landslides, soil erosion and desertification.
- Role of an individual in conservation of natural resources. Equitable use of resources for sustainable lifestyles.

Unit 2:

Ecosystems (5 hrs.)

- Concept of an ecosystem
- Structure and function of an ecosystem
- Producers, consumers and decomposers
- Energy flow in the ecosystem
- Ecological succession
- Food chains, food webs and ecological pyramids
- Introduction, types, characteristic features, structure and function of the following ecosystem
  - Forest ecosystem
  - Grassland ecosystem
  - Desert ecosystem
  - Aquatic deco systems (ponds, streams, lakes, rivers, oceans, estuaries)

Unit 3: Biodiversity and its Conservation (5 hrs.)

- Introduction – definition: genetic, species and ecosystem diversity.
- Bio geographical classification of India
- Value of biodiversity: consumptive use, productive use, social, ethical, aesthetic and option values
- Biodiversity at global, National and local levels
- India as a mega-diversity nation
- Hot spots of biodiversity
- Threats to biodiversity: habitat loss, poaching of wildlife, man-wildlife conflicts
- Endangered and endemic species of India
- Conservation of biodiversity: In situ and Ex-situ conservation of biodiversity

Unit 4: Environmental Pollution (5 hrs.)
Definition Causes, effects and control measures of:

- Air pollution
- Water pollution

- Soil pollution
- Marine pollution
- Noise pollution
- Thermal pollution
- Nuclear hazards
    - Solid waste Management: causes, effects and control measures of urban and industrial wastes
    - Role of an individual in prevention of pollution
    - Pollution case studies
    - Disaster management: floods, earthquake, cyclone and landslides

Unit 5 Social Issues and the Environment (8 hrs.)

- From Unsustainable to Sustainable development
- Urban problems related to energy
- Water conservation, rain water harvesting, watershed management
- Resettlement and rehabilitation of people; its problems and concerns, case studies
- Environmental ethics: Issues and possible solutions
- Climate change, global warming, acid rain, ozone layer depletion, nuclear accidents and holocaust.

Case studies:

- Wasteland reclamation
- Consumerism and waste products
- Environment Protection Act.
- Air (Prevention and Control of Pollution) Act.
- Water (Prevention and control of Pollution) Act
- Wildlife Protection Act
- Forest Conservation Act
- Issues involved in enforcement of environmental legislation
- Public awareness

Unit 6

Human population and the Environment (10 hrs.)

- Population growth, variation among nations

- Population explosion – Family Welfare Program
- Environment and human health
- Human Rights
- Value Education
- HIV/AIDS
- Women and Child Welfare
- Role of Information Technology in Environment and human health Case Studies

Unit 7: Field Work (5 hrs.)

- Visit to a local area to document environmental assets- river/forest/ grassland/hill/mountain.
- Visit to a local polluted site – Urban/Rural/Industrial/Agricultural.
- Study of common plants, insects, birds.
- Study of simple ecosystems-pond, river, hill slopes etc. (Field work equal to 5
- lecture hours)

Reference Books:

1. Erach Bharucha,2021, Textbook of Environmental Studes for UG, 3rd Edition, Orient Blackswan Pvt Ltd, 288 pages

Teaching-Learning Strategies :

1. Learning through discussion among the peer group
2. Experiential Learning
3. Reflective Learning
4. Learning by doing
5. Through Field Studies

Assessment methods and weightages:

- **Assessment methods**:

  Progress towards achievement of learning outcomes will be assessed using the following:

  - time-constrained examinations; closed-book test.
  - problem-based assignments: practical assignments, laboratory reports. Observation of practical skills.
  - individual project report (case study report); team project report; oral presentations, including seminar presentation; viva voce interviews; computerised adaptive testing; peer and self-assessment.

- **Weightage:**
  - Total Weightage of the subject is of 100 marks. (25 Internal marks + 75 Annual examination marks)

Name of the Academic Program : BACHELOR OF OCCUPATIONAL THERAPY (BOT) 1ST YEAR

Course Code: BOT-171 **Title of the Course**: COMPUTER APPLICATION *Qualifying Subject

L-T-P :32 Hours (P) Credits: NA
(L=Lecture hours, T=Tutorial hours, P=Practical hours)

COURSE LEARNING OUTCOMES (CLOs)

After completing this Course, the students should be able to …

CLO 1: To understand and use the computer for basic academic and research purposes.

CLO 2: To understand the basic programming unit and execution of instruction.

CLO 3: To analyse the hardware's or parts of computer.

CLO 4: To apply the knowledge of computers in the learning process.

CLO 5: To apply the computer application as a very important ICT tools in learning and understanding.

Mapping of Course Learning Outcomes (CLOs)with Program Learning Outcomes (PLOs) and Program Specific Outcomes (PSOs)

	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5	PLO 6	PLO 7	PLO 8	PLO 9	PLO 10	PLO 11	PLO 12	PSO 1	PSO 2	PSO 3	PSO 4
CLO1	1	1	1	1	1	3	3	1	1	1	1	1	1	1	1	1

CLO2	1	1	1	1	1	3	3	1	1	1	1	1	1	1	1	1

CLO3	1	1	1	1	1	3	3	1	1	1	1	1	1	1	1	1
CLO4	1	1	1	1	1	3	3	1	1	1	1	1	1	1	1	1
CLO5	1	1	1	1	1	3	3	1	1	1	1	1	1	1	1	1

Grading: 3: High level Mapping
2: Medium level Mapping
1: Low level Mapping

Detailed Syllabus:

BOT 171: COMPUTER APPLICATION (PRACTICAL)

Unit 1:

To familiarize the student with the basics of computer education and its application to Occupational Therapy. (4 hrs.)

Unit 2:

To study the various components of personal computer. (4 hrs.)

Unit 3: To have a working knowledge of hardware and software (Including software related to persons with disability) (4 hrs.)

Unit 4 To practice the operational skills of common computer applications, including work processing and spread sheet software (10 hrs.)

Unit 5 To have a basic knowledge of utility of multimedia. (5 hrs.)

Unit 6

To learn skills of web surfing for literatures, research relevant to the field of medicine. (5 hrs.)

Reference Books:

1. Priti Sinha, Pradeep K., Sinha, 2004, Computer Fundamentals: Concepts, Systems & Applications- 8th Edition, BPB Publications; India, 536 pages

Teaching-Learning Strategies:

1. Learning through discussion among the peer group
2. Experiential Learning
3. Reflective Learning
4. Learning by doing

Assessment methods and weightages:

- **Assessment methods**:

  Progress towards achievement of learning outcomes will be assessed using the following:

  - time-constrained examinations; closed-book test.
  - problem-based assignments: practical assignments, laboratory reports. Observation of practical skills.
  - individual project report (case study report); team project report; oral presentations, including seminar presentation; viva voce interviews; computerised adaptive testing; peer and self-assessment.

- **Weightage:**
  - Total Weightage of the subject is of 100 marks. (25 Internal marks + 75 Annual examination marks)

Name of the Academic Program: BACHELOR OF OCCUPATIONAL THERAPY (BOT) 1ST YEAR

Course Code: BOT-172 **Title of the Course**: **GENERAL FOUNDATION COURSE** *Qualifying Subject
L-T-P: 48 Hours (L) Credits: NA
(L=Lecture hours, T=Tutorial hours, P=Practical hours)

COURSE LEARNING OUTCOMES (CLOs)

After completing this Course, the students should be able to …

CLO 1: To understand basics of physics, chemistry and biology and basic knowledge of English language.

CLO 2: To understand the basics of English grammar for betterunderstanding of the B.O.T course subjects.

CLO 3: To apply the basic knowledge of biology in better understanding of course related subjects eg anatomy, physiology etc.

CLO 4: To apply the knowledge of physics in the biomechanical analysis of human body.

CLO 5: To create a base for better learning of the course related subjects.

Mapping of Course Learning Outcomes (CLOs) with Program Learning Outcomes (PLOs) and Program Specific Outcomes (PSOs)

	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5	PLO 6	PLO 7	PLO 8	PLO 9	PLO 10	PLO 11	PLO 12	PSO 1	PSO 2	PSO 3	PSO 4
CLO1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1
CLO2	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1

CLO3	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1
CLO4	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1
CLO5	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1

Grading: 3: High level Mapping
2: Medium level Mapping
1: Low level Mapping

Detailed Syllabus:

BOT 172 GENERAL FOUNDATION COURSE (THEORY)

Unit 1:

Chemistry: 10 HRS

1. Electrochemical cells
2. Galvanic Cells
3. Conductance of Electrolytic Solutions
4. Electrolytic Cells
5. Batteries

Unit 2:

BIOLOGY 20 HRS

Human Reproduction

- The male reproductive systems
- The female reproductive systems
- Gametogenesis
- Menstrual Cycle

- Fertilization and Implantation

- Pregnancy and Embryonic development
- Parturition and Lactation

: Reproductive health

- Definition
- Population explosion
- Birth control
- Medical Termination of pregnancy
- Sexually Transmitted diseases
- Infertility

Human health and diseases

- Common diseases in humans
- Innate immunity
- Active and passive immunity
- Vaccination and immunisation
- Allergies
- Autoimmunity
- Immune system in body
- AIDS
- Cancer
- Drugs and alcohol abuse
- Effect of drugs / Alcohol Abuse
- Prevention and control

Unit 3: Physics: 10 HRS

- Coulomb's law
- Forces between Multiple charges

- Capacitors and capacitance
    - Definition
    - Parallel plate capacitor
    - Effect of dielectric on capacitance

  - Combination of capacitor
  - Energy store in capacitors
- Ohms law
- Drift of electrons and origin of resistivity
- Combination of resistors-series and parallel

Unit 4: English 8 HRS

- Noun
- Pronouns
- Adjectives
- Verbs
- Preposition
- Conjunctions
- Letter Writing
- Easy writing

Reference Books:

1. MTG FOUNDATION COURSE OF PCB(set of 3 books) 2019, MTG Board Editorial, India, 1056 pages (all 3 books).

Teaching-Learning Strategies:

1. Learning through discussion among the peer group
2. Experiential Learning
3. Reflective Learning
4. Learning by doing

Assessment methods and weightages:

- **Assessment methods**:

Progress towards achievement of learning outcomes will be assessed using the following:

- time-constrained examinations; closed-book test.
- problem-based assignments: practical assignments, laboratory reports. Observation of practical skills.

- individual project report (case study report); team project report; oral presentations, including seminar presentation; viva voce interviews; computerised adaptive testing; peer and self-assessment.

- **Weightage:**
  - Total Weightage of the subject is of 100 marks. (25 Internal marks + 75 Annual examination marks)

BACHELOR OF OCCUPATIONAL THERAPY (BOT) 2nd YEAR

Name of the Academic Program: BACHELOR OF OCCUPATIONAL THERAPY (BOT) 2nd YEAR

Course Code: **B.O.T. 261** Title of the Course: **GENERAL MEDICINE INCLUDING CARDIOPULMONARY CONDITIONS(THEORY)**

L-T-P: (**L)**-80 hours Credits: NA
(L=Lecture hours, T=Tutorial hours, P=Practical hours)

COURSE LEARNING OUTCOMES (CLOs)

After completing this Course, the students should be able to …….

CLO-1: Understand aetiology, pathophysiology, signs & symptoms & management of thevarious endocrinal, metabolic, geriatric , nutrition deficiency conditions, rheumatological cardiovascular, respiratory & neurological conditions

CLO-2: Apply skills of clinical examination of musculoskeletal, pulmonary,cardiovascular & neurological system.

CLO-3: Analyze and evaluate auscultation findings with special emphasis to pulmonary system, chest x-ray, blood gas analysis, P.F.T. Findings, and blood studies done for medical conditions

CLO-4: Create and apply the principles of management at the medical intensive care unit

Mapping of Course Learning Outcomes (CLOs)with Program Learning Outcomes (PLOs) and Program Specific Outcomes (PSOs)

	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5	PLO 6	PLO 7	PLO 8	PLO 9	PLO 10	PLO 11	PLO 12	PSO 1	PSO 2	PSO 3	PSO 4
CLO1	3	3	3	3	3	1	3	3	1	1	3	3	3	2	1	2
CLO2	3	3	3	3	3	1	3	3	1	1	3	3	3	1	2	1
CLO3	3	3	3	3	3	1	3	3	1	1	3	3	3	1	3	1
CLO4	3	3	3	3	3	3	3	3	1	2	3	3	3	2	2	3

Grading: 3: High level Mapping
2: Medium level Mapping
1: Low level Mapping

Detailed Syllabus:

B.O.T. 261 GENERAL MEDICINE INCLUDING CARDIOPULMONARY CONDITIONS (THEORY)

Unit 1: (35 Hours)

Genetic, Immunological, Environmental, Climatic Factors in Disease.{2 Hrs.}

- Diseases due to Infection: Major Manifestations of Infection, Principles of Management, Diseases due to: Viruses, Chlamydeous, Rickettsia, Bacteria, Spirochetes, Fungi, protozoa, Helminthes, Arthropods, STD. {2 Hrs.}

- Diseases of the alimentary tract and pancreas including: stomach and duodenum, large and small intestine and pancreas. {2 Hrs.}
- Gastro-intestinal hemorrhage, inflammatory bowel disease.
    - Diseases of the teeth {2 Hrs.}
    - Diseases of the Liver and Biliary System including: jaundice, portal hypertension, ascites, renal failure, hepatic encephalopathy, fulminant hepatic failure, acute and chronic parenchymal disease, tumors of the liver, liver transplantation, gall stones, cholecystitis. {2 Hrs.}
    - Nutritional factors in disease. {2 Hrs.}
    - Disturbances in water, electrolyte and acid – base balance. Physiology of water and electrolytes, major manifestations of electrolyte and acid – base disorders, hypernatremia, hyponatremia, hyperkalemia, hypokalemia, sodium and water excess, calcium, phosphate and magnesium disorders, metabolic acidosis and alkalosis, respiratory acidosis and alkalosis, mixed acid – base disorders. {4 Hrs.}
    - Diseases of Kidney and Genito- urinary system including: Acute glomerulonephritis syndrome, nephrotic syndrome, recurrent hematuria, renal failure, glomerular diseases, infections if the kidney and urinary tract, obstruction of the urinary tract, urinary tract calculi and nephrocalcinosis, congenital abnormalities of the kidney, drug – induced kidney disorders and tumors. {4Hrs.}
    - Diseases of the endocrinal system and metabolism including: Hypothalamus, pituitary, thyroid, parathyroid, adrenal diseases Sexual disorders, Diabetes Mellitus. {3 Hrs.}
    - Diseases of the Blood. Disorders of the erythrocytes & leucocytes, Blood transfusion, Hemostasis Disorders of the venous thrombosis {3 Hrs.}
- Oncology (clinical presentation and principles of management) {3 Hrs.}
- Principles of Geriatric Medicine. Demography of aging, normal old age, atypical presentation of disease, acute confusion, urinary incontinence, immobility, falls. {3 Hrs.}
- Acute poisoning Assessment of severity, general principles, general features and management and prevention. {3 Hrs.}

Unit 2: **CARDIAC DISEASE (10 Hours)**

- Disorders of heart rate, rhythm, and conduction. {2 Hrs.}
- Ischemic (Coronary) heart disease, Myocardial Infarction. {2 Hrs.}
- Vascular disease {2 Hrs.}
- Diseases of the heart valves. {1 Hr.}
- Congenital Heart Disease. {1 Hr.}

- Diseases of the myocardium. {1 Hr.}
- Diseases of the pericardium. {1 Hr.}

Unit 3: **PULMONARY DISEASE: (12 Hours)**

- Obstructive pulmonary disease. {2 Hrs.}
- Infections {2 Hrs.}
- Tumors of the Bronchus and lungs. {2 Hrs.}
- Interstitial pulmonary diseases. {2 Hrs.}
- Diseases of the nasopharynx, larynx, trachea. {2 Hrs.}
- Diseases of the pleura, diaphragm, chest wall. {2 Hrs.}

Unit 4: **SKIN (8 Hours)**

- Signs & symptoms of skin disease. {1 Hr.}
- Skin damage from environmental hazards. {1 Hr.}
- Infections, infestations, insect bites, & stings. {1 Hr.}
- Immunologically mediated skin disorders. {2 Hrs.}
- Skin disorders in AIDS, immunodeficiency & venereal disease. {1 Hr.}
- Brief description of eczematous dermatomes, psoriasis, lichen planus, acne, rosacea, and similar disease, malignant disease of skin, disorders of keratinization, skin problems in infancy, old age, pregnancy & the skin, metabolic disorders & reticulo histiocytic proliferative disorders, disorders of hair & nails, systemic disease, disorders of pigmentation, principles of management of skin diseases. {2 Hrs.}

Unit 5: **PEDIATRICS (15 Hours)**

- Normal fetal development & child birth, including assessment of neonate {2 Hrs.}
- Development of Normal child – Neuro-motor, physical; growth, cognitive, intellectual, social etc. {2 Hrs.}
- Examination & assessment of a pediatric patient {1 Hr.}

- Congenital & Acquired musculoskeletal disorders {2 Hrs.}
- Congenital & Acquired Cardio-pulmonary disorders {1 Hr.}
- Congenital & Acquired neurological disorders {2 Hrs.}
- Hereditary disorder {1 Hr.}
- Nutritional vitamins Deficiency & developmental disorders {2 Hrs.}
- Burns injuries & accident {1 Hr.}
- Common surgical interventions {1 Hr.}

Reference Books:

1. Ralston, S. H., Penman, I. D., Strachan, M. W. J., & Hobson, R. (Eds.). (2018). *Davidson's principles and practice of medicine* (23rd ed.). Elsevier Health Sciences.
2. Aspi F Golwalla & Sharukh A Golwalla & Milind Y Nadkar (2017). Golwalla's Medicine for Students. Jaypee
3. Kasper, D. L., & Harrison, T. R. (2005). *Harrison's principles of internal medicine*. New York: McGraw-Hill, Medical Pub. Division.
4. In Kasper, D. L., In Fauci, A. S., In Hauser, S. L., In Longo, D. L., In Jameson, J. L., & In Loscalzo, J. (2015). *Harrison's principles of internal medicine*.

Teaching-Learning Strategies :

- Effective Lecturing
- Flipped classroom
- Classroom Discussions
- Learning through discussion among the peer group
- Open ended questions by teacher
- Open ended questions from students
- Group Projects/Assignments
- Active learning

Assessment methods and weightages:

- **Assessment methods**:

  Progress towards achievement of learning outcomes will be assessed using the following:

  - time-constrained examinations; closed-book test.
  - problem-based assignments: practical assignments, laboratory reports. Observation of practical skills.
  - individual project report (case study report); team project report; oral presentations, including seminar presentation; viva voce interviews; computerised adaptive testing; peer and self-assessment.

- **Weightage:**

  1.Total Weightage of the subject is of 100 marks. (25 Internal marks + 75 Annual examination marks)

  2.In order to pass a paper, a student has to secure at least 50% marks in that paper**.**

Name of the Academic Program: BACHELOR OF OCCUPATIONAL THERAPY (BOT) 2nd YEAR

Course Code: **B.O.T. 262** Title of the Course: **GENERAL SURGERY INCLUDING CARDIOPULMONARY CONDITIONS(THEORY)**

L-T-P : **L**-80 hours Credits: NA
(L=Lecture hours, T=Tutorial hours, P=Practical hours)

COURSE LEARNING OUTCOMES (CLOs) (5 TO 8)

After completing this Course, the students should be able to …….
CLO-1: Understand the effects of surgical trauma & anesthesia.
CLO-2: clinically evaluate & describe the surgical management in brief in a] wounds & ulcers b] burns c] head injuries
CLO-3: Analyze, read & interpret findings of the radiography images.
CLO-4: pre-operative evaluation, surgical indications & various surgical approaches & post-operative management in various abdominal/ thoracic/peripheral vascularconditions/ENT conditions / Ophthalmological conditions/ plastic surgery conditions
CLO-5: Understand the surgical approaches in the form of line diagram & will be able to describe the components of soft tissues cut to reach the target tissue & the possible post-operative complications

Mapping of Course Learning Outcomes (CLOs)with Program Learning Outcomes (PLOs) and Program Specific Outcomes (PSOs)

	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5	PLO 6	PLO 7	PLO 8	PLO 9	PLO 10	PLO 11	PLO 12	PSO 1	PSO 2	PSO 3	PSO 4
CLO1	1	2	1	3	1	1	3	3	1	1	3	3	3	1	1	3

CLO2	1	2	1	3	2	1	3	3	1	1	3	3	3	1	1	3

CLO3	1	3	1	3	1	1	3	3	2	3	3	3	1	2	1	1
CLO4	3	1	1	3	1	1	3	3	1	3	3	3	2	1	1	2
CLO5	3	1	1	3	1	1	2	3	1	1	2	3	2	2	2	2

Grading: 3: High level Mapping
2: Medium level Mapping
1: Low level Mapping

Detailed Syllabus:

B.O.T 262 GENERAL SURGERY INCLUDING CARDIOPULMONARY CONDITIONS(THEORY)

Unit 1: (20 Hours)

- General scheme of case taking: history, physical examination, investigations, progress, follow – up, termination. (3 Hrs.)
- Healing and wound management. (2 Hrs.)
- Accident and emergency surgery, warfare injuries. (2 Hrs.)
- Resuscitation & support (acute & long term). (2 Hrs.)
- Wound infections. (2 Hrs.)
- Immunology and organ transplantation. (2 Hrs.)
- Tumours, cysts, ulcers, sinuses. (2 Hrs.)
- Burns. (2 Hrs.)
- Arterial & venous disorders.(2 Hrs.)
- Lymphatic and lymph nodes.(1 Hrs.)

Unit 2: SURGERIES OF THE THORAX, HEART AND PERICARDIUM (20 Hrs.)

Investigation method (1 Hrs.)

- Cardio – respiratory resuscitation .(1 Hrs.)
- Thymus. .(1 Hrs.)
- Chest injuries and Diseases of the chest wall. .(1 Hrs.)
- Diseases of the pleura. (1 Hrs.)
- Trachea. .(1 Hrs.)
- Diseases of the Bronchi and Lung. (1 Hrs.)
- Post –operative pulmonary complications.(1 Hrs.)
- Diaphragm .(1 Hrs.)
- Mediastinal tumours. .(1 Hrs.)
- Cardiac surgeries: extra cardiac, closed intra-cardiac, open cardiac operation .(1 Hrs.)
- Pericardium. .(1 Hrs.)
- Congenital Heart Diseases.(1 Hrs.)
- Acquired Heart Disease. .(1 Hrs.)
- Aortic aneurysm .(1 Hrs.)
- Cardio thoracic trauma. .(1 Hrs.)
- Skeletal cardio-myoplasty. (1 Hrs.)
- Cardiac transplantation. .(1 Hrs.)
- Heart lung transplantation. .(1 Hrs.)
- Mechanical circulatory support. .(1 Hrs.)

Unit 3: GYNAECOLOGY AND OBSTETRICS (15 Hrs.)

History taking

- Terminologies used. (1 Hrs.)
- Classification of Diseases.

- Birth control(1Hrs.)

- Reproduction.
- Placenta and placental membranes. (1 Hrs.)
- Foetus.
- Physiological changes during pregnancy.
- Endocrinology in relation to reproduction. (2 Hrs.)
- Foetus – in - utero.
- Foetal skull and maternal pelvis.
- Antenatal care.
- Antenatal assessment of foetal well – being. (2 Hrs.)
- Normal labour, normal puerperium. (1 Hrs.)
- Complications of pregnancy and labour. (1 Hrs.)
- Special considerations: previous history of C- section, Rh negative, elderly primigravida, grand multipara, bad obstetric history, and obesity. (2 Hrs.)
- Term, newborn infant, low birth weight baby. (1 Hrs.)
- Diseases of the foetus and newborn. (1 Hrs.)
- Pharmacotherapeutics, induction of labour, operative obstetrics.
- Special topics: foetal distress, intrapartum foetal monitoring, shock inobstetrics, acute renal failure, blood coagulation disorders, high – risk pregnancy, immunology in obstetrics. (2 Hrs.)
- Aids to diagnosis in obstetrics.

Unit 4: Eye 10 hours

Brief description of anatomy and physiology of the eye. (1 Hrs.)

- Ophthalmic optics and brief description of examination. (2 Hrs.)
- Diseases of the eye and adnexa of the eye. (2 Hrs.)
- Disorders of motility of the eye. (1 Hrs.)
- Ocular manifestations of diseases of the nervous system. (1 Hrs.)
- Brief description of immunopathology of the eye. (1 Hrs.)
- Preventive ophthalmology. (2 Hrs.)

Unit 5: ENT 15 hours

Ear (7 hrs)

- Brief description of anatomy and physiology, peripheral receptors & central neural pathways of auditory and vestibular system.

- Audiology and acoustics.
- Brief description of assessment of hearing.(TFT's & Audiometry)
- Hearing loss.
- Hearing Aid & cochlear Implants
- Rhinoplasty
- Assessment of vestibular functions.
- Disorders of vestibular system.
- Diseases of the external and middle ear.
- Otosclerosis.
- Facial nerve and its disorders.

- Brief description of Meniere's disease, acoustic neuroma,
- otalgia, tinnitus & Vertigo
- Tumours of external ear, middle ear, and mastoid, lateral skull base.

Nose and Para nasal Sinuses (3 hrs)

- Brief description of anatomy and physiology.
- Classification of diseases and disorders
- Rhinitis (acute, chronic, allergic, other forms of non – allergic rhinitis)
- Trauma to the face.(Maxillofacial)
- Sinusitis & its complications

Throat (5 hrs)

- Thyroid Gland & its Disorder.
- Head and Neck oncology
- Brief description of diseases of the oral cavity, salivary glands,
- Pharynx larynx, trachea, oesophagus & Cervical Lymph nodes
- Brief description of the techniques used for examination
- Brief description of clinical examination including telescopy
- Indications and types of operative surgery. (Tracheostomy, Tonsillectomy & adenoidectomy, Micro-Lyryngo-scopy, mastoidectomy & tympanoplasty)
- Instrumentation-Diagnostic and Therapeutic.

Reference Books:

1. S. Das , A Concise Textbook of Surgery 2021, 15th edition
2. Logan Turner's Diseases of the Nose, Throat and Ear - 10th Edition.
3. John Jacob Ballenger, Diseases of the Nose, Throat, Ear, Head and Neck (1991),14th edition, Lea & Febiger,U.S

Teaching-Learning Strategies :

- Learning through discussion among the peer group
- Group Projects
- Open ended questions by teacher
- Open ended questions from students
- Preparation of question bank by students at various cognitive levels

Assessment methods and weightages in brief:

- **Assessment methods**:

  Progress towards achievement of learning outcomes will be assessed using the following:

  - time-constrained examinations; closed-book test.
  - problem-based assignments: practical assignments, laboratory reports. Observation of practical skills.
  - individual project report (case study report); team project report; oral presentations, including seminar presentation; viva voce interviews; computerised adaptive testing; peer and self-assessment.

- **Weightage:**

  1.Total Weightage of the subject is of 100 marks. (25 Internal marks + 75 Annual examination marks)

  2.In order to pass a paper, a student has to secure at least 50% marks in that paper**.**

Name of the Academic Program : BACHELOR OF OCCUPATIONAL THERAPY (BOT) 2nd YEAR

Course Code: **B.O.T. 263**

Title of the Course: **PHARMACOLOGY(THEORY)**

L-T-P: **L-** 80 hours

Credits: NA

(L=Lecture hours, T=Tutorial hours, P=Practical hours)

COURSE LEARNING OUTCOMES (CLOs)

After completing this Course, the students should be able to ……

CLO-1: Understand pharmacology effects of commonly used drugs by patients referred for physiotherapy. List their adverse reaction, precautions to be takenand contra – indication, formulation androute of administration.

CLO-2: Apply and analyze whether the pharmacological effects of the drug interfere with therapeutic response of Occupational therapy & vice versa.

CLO-3: Apply the knowledge of use of analgesics & anti- inflammatory agents with the movementdisorders with consideration of cost efficiency &safety for individuals need.

CLO-4: Create the understanding of other essential & commonly used drugs by patients –thebasis for their use & common as well as serious adverse reaction.

Mapping of Course Learning Outcomes (CLOs)with Program Learning Outcomes (PLOs) and Program Specific Outcomes (PSOs)

	PLO 1	**PLO 2**	**PLO 3**	**PLO 4**	**PLO 5**	**PLO 6**	**PLO 7**	**PLO 8**	**PLO 9**	**PLO 10**	**PLO 11**	**PLO 12**	**PSO 1**	**PSO 2**	**PSO 3**	**PSO 4**
CLO1	1	2	1	3	1	1	3	3	1	1	3	3	3	1	1	3

CLO2	1	2	1	3	2	1	3	3	1	1	3	3	3	1	1	3

CLO3	1	3	1	3	1	1	3	3	2	3	3	3	1	2	1	1
CLO4	3	1	1	3	1	1	3	3	1	3	3	3	2	1	1	2

Grading: 3: High level Mapping
2: Medium level Mapping
1: Low level Mapping

Detailed Syllabus:

B.O.T 263 PHARMACOLOGY (THEORY)

Unit 1:

General Pharmacological Principles

- Definitions and Routes of Drug Administration(3 Hrs.)
- Pharmacokinetics: transportation across membranes, absorption, distribution, biotransformation, excretion, kinetics of elimination (3 Hrs.)
- Pharmacodynamics: principles and mechanisms of drug action, combined effects of drugs, drug dosage, factors modifying drug action.(4 Hrs.)
- Adverse Drug Effects (3 Hrs.)

Unit 2:

- Drugs acting on Central Nervous System: anaesthetics, alcohols, alkaloids, narcotics, neuroleptics hypnotics, anticonvulsants, sedatives, stimulants, antianxiety (7 Hrs.)
- Drugs acting on peripheral nervous system: Skeletal muscle relaxants, local anaesthetics (6 Hrs.)
- Drugs acting on the Autonomic Nervous System: cholinergic & anticholinergic drugs, adrenergic & antiadrenergic drugs. (4 Hrs.)

- Drugs acting on cardiac vascular system. (7 Hrs.)

- Drugs acting on the respiratory system. (5 Hrs.)
- Drugs acting on the Kidney. (6 Hrs.)
- Drugs affecting Blood and Blood formation (4 Hrs.)
- Gastrointestinal Drugs(4 Hrs.)
- Antimicrobial Drugs (3 Hrs.)
- Drugs acting on Skin and Mucous membrane (2 Hrs.)
- Antiseptics, Disinfectants, and Ecto-parasiticides (3 Hrs.)
- Chelating agents (2 Hrs.)
- Chemotherapeutic agents. (4 Hrs.)
- Hormones and drugs affecting endocrine functions (2 Hrs.)
- Vitamins (2 Hrs.)
- Metabolic and other inorganic compounds. (2 Hrs.)
- Immunologic agents. (2 Hrs.)
- Diagnostic agents. (2 Hrs.)

Reference Books:

1.John Henry Gaddum, A. S. V. Burgen, James Fabian Mitchell, Gaddum's Pharmacology,9th edition, Oxford University Press

2.John Chrstian (Jr.), Charles Jeller Carr,The pharmacology Principle of Medical Practise, 1961, Williams & Wilkins

3. Louis Sanford Goodman, Laurence Brunton, Alfred Gilman, John Lazo, Keith Parker · 2005,The pharmacological basis of therapeutics, McGraw-Hill Education

4.Satoskar and Bhandarkar (2015), Pharmacology and Pharmacotherapeutics,24th edition, Elsevier Health Sciences

5. Goth Anders, Elliot S. Vesell (1984), Medical Pharmacology Principles and Concepts, 11th edition, Mosby

Teaching-Learning Strategies :

- Learning through discussion among the peer group

- Group Projects
- Open ended questions by teacher

- Open ended questions from students

Assessment methods and weightages :

- **Assessment methods**:

  Progress towards achievement of learning outcomes will be assessed using the following:

  - time-constrained examinations; closed-book test.
  - problem-based assignments: practical assignments, laboratory reports. Observation of practical skills.
  - individual project report (case study report); team project report; oral presentations, including seminar presentation; viva voce interviews; computerised adaptive testing; peer and self-assessment.

- **Weightage:**

  1.Total Weightage of the subject is of 100 marks. (25 Internal marks + 75 Annual examination marks)

  2.In order to pass a paper, a student has to secure at least 50% marks in that paper**.**

Name of the Academic Program : BACHELOR OF OCCUPATIONAL THERAPY (BOT) 2nd YEAR

Course Code: **B.O.T. 264** Title of the Course: **GENERAL PSYCHOLOGY(THEORY)**

L-T-P: **L-** 80 hours Credits: NA
(L=Lecture hours, T=Tutorial hours, P=Practical hours)

COURSE LEARNING OUTCOMES (CLOs)

After completing this Course, the students should be able to ……
CLO-1: Understand the term psychology & its importance in the health delivery system, will gain knowledge of psychological maturation during human development, growth, & alterationsduring aging process.
CLO-2: Understand the importance of psychological status of the person inhealth & disease, environmental & emotional influence on the mind & personality.
CLO-3: Application of the knowledge as to how to evaluate deal with the patient.

Mapping of Course Learning Outcomes (CLOs)with Program Learning Outcomes (PLOs) and Program Specific Outcomes (PSOs)

	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5	PLO 6	PLO 7	PLO 8	PLO 9	PLO 10	PLO 11	PLO 12	PSO 1	PSO 2	PSO 3	PSO 4
CLO1	1	2	1	3	1	1	3	3	1	1	3	3	3	1	1	3
CLO2	1	2	1	3	2	1	3	3	1	1	3	3	3	1	1	3

CLO3	1	3	1	3	1	1	3	3	2	3	3	3	1	2	1	1

Grading: 3: High level Mapping
2: Medium level Mapping
1: Low level Mapping

.

Detailed Syllabus:

B.O.T 264 GENERAL PSYCHOLOGY(THEORY)

Unit 1:

- Definition, application and methods in psychology. (2 Hrs.)
- Biology of Behaviour. (2 Hrs.)
- Sensory processes and perception. (2 Hrs.)

Unit 2:

- Principles of learning.
  - Classical and Instrumental Conditioning, Cognitive learning. (5 Hrs.)
- Memory.
  - Theories, long and short-term memories, forgetting, amnesia. (6 Hrs.)
- Thinking and Language.
  - Concepts, thinking process, problem- solving and decision making,
  - Creative thinking and language communication. (6 Hrs.)
- Motivation.
  - Theories, Biological and Social motives, frustration and conflict of motives, motives to know and be effective. (6 Hrs.)
- Emotion and Stress. (6 Hrs.)
  - Expression and perception of emotions, physiology and application of emotion.
- Social perceptions, influences, and relationships. (5 Hrs.)

Unit 3:

- Attitudes.(7 hrs)
  - Nature and measurement of attitudes.
  - Attitude theories
  - Factors in attitude change
  - Behavior and attitudes
- Development – A Lifespan Perspective (infancy, childhood, adolescence, adult, old age) (10 Hrs.)
- Brief description of Psychological assessment and testing. (5 Hrs.)
- Personality
  - Defining and thinking about personality (8Hrs.)
  - Theories and issues and controversies and research
- Abnormal Psychology. (5Hrs.)
- Therapy for Psychological distress. (5 Hrs.)

Reference Books:

1. Morgan C.T., King R. A., Weijz J. R. Schopler J. (1993). Introduction to Psycology, 7th Edition, Tata McGraw-Hill Publishing Co. Ltd.
2. Papalia D. E., Olds S. W (2008), Human Development, 5th. Edition, Tata McGraw Hill Publishing Co. Ltd
3. Fernald, L Dodge, Munn's Introduction to Psychology, 5th edition, AITBS publisher
4.Parameshwaran E. G. & Ravichandra K. - Experimental Psychology: A Laboratory Manual,1st edition,
Neelkamal 5.Julia Nunn, Laboratory Psychology : A Beginner's Guide, 1st edition, Psychology Press Ltd., East
Sussex, U.K.

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Teaching-Learning Strategies in brief :

- Learning through discussion among the peer group
- Group Projects
- Open ended questions by teacher

- Open ended questions from students
- Experiential Learning

Assessment methods and weightages in brief:

- **Assessment methods**:

  Progress towards achievement of learning outcomes will be assessed using the following:

  - time-constrained examinations; closed-book test.
  - problem-based assignments: practical assignments, laboratory reports. Observation of practical skills.
  - individual project report (case study report); team project report; oral presentations, including seminar presentation; viva voce interviews; computerised adaptive testing; peer and self-assessment.

- **Weightage:**

  1.Total Weightage of the subject is of 100 marks. (25 Internal marks + 75 Annual examination marks)

  2.In order to pass a paper, a student has to secure at least 50% marks in that paper**.**

Name of the Academic Program BACHELOR OF OCCUPATIONAL THERAPY (BOT) 2nd YEAR

Course Code: **B.O.T. 265** Title of the Course: **PATHOLOGY AND MICROBIOLOGY(THEORY)**

L-T-P: L- 80 hours Credits: NA
(L=Lecture hours, T=Tutorial hours, P=Practical hours)

COURSE LEARNING OUTCOMES (CLOs)

After completing this Course, the students should be able to …….

CLO-1: Understand concepts of cell injury & changes produced therebyin different tissues & organs, capacity of the body in healing process.

CLO-2: Understand in brief, about the hematological diseases & other organ systems, investigations necessary to diagnose them & determine their prognosis.

CLO-3: Analyze the Etio -pathogenesis, thepathological effects & the clinic- pathological correlation of common infections & non-infectious diseases.

CLO-4: Apply the knowledge of concepts of neoplasia with reference to the etiology,gross & microscopic features, diagnosis & prognosis in different tissues & organsof the body.

CLO-5: Apply the knowledge of common immunological disorders & their resultant effects on the human body.

CLO-6: Understand and apply the knowledge of the agents responsible for causing human infections, pertaining to CNS, CVS, Musculo - skeletal, & respiratory system

Mapping of Course Learning Outcomes (CLOs)with Program Learning Outcomes (PLOs) and Program Specific Outcomes (PSOs)

	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5	PLO 6	PLO 7	PLO 8	PLO 9	PLO 10	PLO 11	PLO 12	PSO 1	PSO 2	PSO 3	PSO 4
CLO1	1	2	1	3	1	1	3	3	1	1	3	3	3	1	1	3
CLO2	1	2	1	3	2	1	3	3	1	1	3	3	3	1	1	3
CLO3	1	3	1	3	1	1	3	3	2	3	3	3	1	2	1	1
CLO4	3	1	1	3	1	1	3	3	1	3	3	3	2	1	1	2
CLO5	3	1	1	3	1	1	2	3	1	1	2	3	2	2	2	2
CLO6	1	2	1	3	1	1	3	3	1	1	3	3	3	1	1	3

Grading: 3: High level Mapping
2: Medium level Mapping
1: Low level Mapping

Detailed Syllabus:

B.O.T 265 PATHOLOGY AND MICROBIOLOGY(THEORY)

PATHOLOGY(60 Hours)

UNIT-1: Introduction to Pathology (4Hrs.)

- Definitions
- Branches
- Pathology as a Science
- Correlation between Pathology and Occupational Therapy

- Cell Injuries, Death and Adaptation (3 Hrs.)
  - Definitions and Causes
  - Mechanisms
  - Morphology of Cell Injury
  - Apoptosis
  - Cellular Adaptations to Growth and Injury
  - Acute and Chronic Inflammation
  - General Features of Inflammation
  - Vascular Changes and Cellular Events-Acute Inflammation.

- Chemical Mediators of Inflammation. (3 Hrs.)
  - Definitions, Causes and Histological Features-Chronic Inflammation.
  - Tissue and Cell Repair
  - Normal Cell Growth
  - Repair by Connective tissue

Unit 2:

- Wound Healing (4 Hrs.)

- Fracture Healing
- Pathological Aspects of repair
- Hemodynamic Disorders

- Edema, Hyperaemia and Congestion, Haemorrhage, Haemostasis and Thrombosis, Embolism, Infarction, Shock. (4 Hrs.)
  - Disorders of Immune System
  - Cells of the Immune System

- Immune Mechanisms of Tissue Injury (4 Hrs.)
  - Autoimmune Disease: Mechanism, RA, SLE, Myasthenia Gravis.
  - Immunodeficiency Diseases: Differences between Primary and Secondary Immunity, AIDS.

- Neoplasms (3Hrs.)
  - Definitions and Nomenclature.
  - Characteristics.
  - Carcinogenesis, Carcinogenic agents
  - Biology of Tumour Growth, Tumour Immunity.
  - Environmental Disorders

Unit 3:

- Injury by Chemical Agents (3 Hrs.)
- Injury by Physical Agents
- Infectious Diseases
- Categories of Infectious Agents
- Host barriers to Infection (4 Hrs.)

- Immune Evasion by Microbes
- Nutritional Disorders

- Nutritional Deficiencies (4 Hrs.)
- Obesity
- Diet and Systemic Disease
- Vascular System
- Vascular Wall Cells and their Response to Injury
- Arterial Diseases: Arteriosclerosis, Hypertension and Hypertensive (4 Hrs.)
- Vascular disease, Buerger's disease, Aneurysm. Venous Disease:
- Varicose Veins, Phlebothrombosis, Thrombophlebitis.
- Lymphatic Diseases: Lymphangitis, Lymphedema Cardiac System
- Principles of Cardiac Dysfunction
- Types of Heart Disease: Ischemic Heart Disease,
- Hypertensive Heart Disease, Valvular Heart Disease (3 Hrs.)
- Myocardial Heart Disease, Pericardial Heart Disease,
- Congenital Heart Disease.
- Hematopoietic and Lymphoid System
- Anemia, Polycythemia, Leukopenia, Leukemia, Deficiencies of Factor VIII and IX, Splenomegaly. (3Hrs.)

Unit 4:

- Respiratory System
- Atelectasis, Obstructive Lung disease, Restrictive Lung Disease,
- Vascular Lung Diseases, Pulmonary Infections: Pneumonia (2Hrs.)
- Tuberculosis, Lung Abscess, leural Disorders: Pneumothorax, Hemothorax.
- Gastrointestinal System

- Gastritis, Gastric Ulcerations, Ischemic Bowel Disease, Appendicitis,
- GI Tract Infections, Cohn's Disease, Jaundice, Hepatic Failure, Cirrhosis, Hepatitis, Cholelithiasis, Cholecystitis, Diabetes Mellitus, Pancreases. (2 Hrs.)
- Urinary and Reproductive System
- Nephritis, Kidney Stones.
- Male Genital Tract: Specific Inflammation. (2 Hrs.)
- Female Genital Tract: Pelvic Inflammatory Disease, Menopause and Post-Menopausal Changes, Endometritis, Carcinoma of the Mammary Glands.
- Endocrine System (2 Hrs.)
    - Hyperpituitarism, Hypopituitarism, yperthyroidism, Hypothyroidism
- Musculoskeletal System (2 Hrs.)
    - Osteoporosis, Osteomyelitis, Osteoarthritis, Gout, Osteoma,
    - Osteosarcoma, Chondroma, Chondrosarcoma,
    - Osteochondrosarcoma, Muscular Dystrophy.
- Integumentary System
    - Psoriasis, SLE, Acne Vulgaris. (2 Hrs.)
- Nervous System (2 Hrs.)
    - Hydrocephalus, Meningitis, Hematoma , Multiple Sclerosis,
    - Alzheimer's Disease, Parkinsonism, G.B. Syndrome.

MICROBIOLOGY (20 HOURS)

UNIT:5: Immunology (5 Hrs.)

Brief description of immune system, Immunity, Immune Responses, immunodeficiency Diseases, Hypersensitivity disorders

- Bacteriology (5 Hrs.)
    - Morphology, Nutritional Requirements, Metabolism, Growth, Classification and Identification of Bacteria
    - Staphylococcus, Streptococcus, Pneumococcus, Neisseria, Mycobacteria, Clostridium, salmonnela, vibrio-colera, E-coli, Sigella, Tetanus
- Virology (5 Hrs.)

- General Characteristics and Classification of Virus
- Virus-Host Interaction
- DNA and RNA Viruses, HIV

- Miscellaneous (5 Hrs.)
  - Brief description of medical mycological classification, candilla, Ring Worm, Cryptococcus
  - Parasitology (malaria, amebiosis, ascaris)
  - Bacteriology of Water, Milk and Air.
  - Hospital Infection
  - Diagnostic Microbiology

Reference Books:

1.Vinay Kumar, Abul Abbas (2017), Jon Aster,Robbins Basic Patho, 10th Edition, Elsevier

2.Bhardwaj (2013) , Boyd's Textbook Of Pathology, 10th Edition, Wolters Kluwer India Pvt. Ltd

3.P.Chakraboty (2013), Textbook Of Microbiology, 3rd Edition, New Central Book Agency

4.Dr Reba Kanungo (2017) , Ananthanarayan and Paniker's Textbook of Microbiology, 10th Edition, The Orient Blackswan

Teaching-Learning Strategies:

- Learning through discussion among the peer group
- Group Projects
- Open ended questions by teacher
- Open ended questions from students
- Experiential Learning

Assessment methods and weightages:

- **Assessment methods**:

  Progress towards achievement of learning outcomes will be assessed using the following:

  - time-constrained examinations; closed-book test.
  - problem-based assignments: practical assignments, laboratory reports. Observation of practical skills.

- individual project report (case study report); team project report; oral presentations, including seminar presentation; viva voce interviews; computerised adaptive testing; peer and self-assessment.

- **Weightage:**

  1.Total Weightage of the subject is of 100 marks. (25 Internal marks + 75 Annual examination marks)
  2.In order to pass a paper, a student has to secure at least 50% marks in that paper**.**

Name of the Academic Program: BACHELOR OF OCCUPATIONAL THERAPY (BOT) 2nd YEAR

Course Code: **B.O.T. 266 &B.O.T. 267** Title of the Course: **Biomechanics and kinesiology(Theory)& Biomechanics and Kinesiology (Practical)**

L-T-P: **L**- 144 hours; **P**- 96 hours Credits: NA

(L=Lecture hours, T=Tutorial hours, P=Practical hours)

COURSE LEARNING OUTCOMES (CLOs)

After completing this Course, the students should be able to …….

CLO-1: Understand, apply, analyze and evaluate the effective treatment program using biomechanical principles.

CLO-2: Understand the effects of forces on objects, COG of an object.

CLO-3: Analyze and evaluate the axes and planes of motion at the joints of spine, shoulder girdle, joints of upper extremity, pelvic girdle and joints of lower extremity.

CLO-4: Evaluate and create treatment of different types of muscle contraction, muscle , group action of muscles and coordinated movement.

CLO-5: Analysis of normal and abnormal posture with to respect to COG. And the optimal position of joints in anterio- posterior and lateral views. CLO-6: Analysis of normal gait and to create measurementof spatio- temporal features with respect to pathological gaits.

Mapping of Course Learning Outcomes (CLOs)with Program Learning Outcomes (PLOs) and Program Specific Outcomes (PSOs)

	PLO 1	**PLO 2**	**PLO 3**	**PLO 4**	**PLO 5**	**PLO 6**	**PLO 7**	**PLO 8**	**PLO 9**	**PLO 10**	**PLO 11**	**PLO 12**	**PSO 1**	**PSO 2**	**PSO 3**	**PSO 4**
CLO1	3	2	2	3	3	2	3	3	3	3	2	3	3	2	3	2

CLO2	2	2	1	3	3	1	1	2	3	2	1	1	1	1	2	1
CLO3	3	2	2	3	3	2	3	3	3	3	2	3	3	2	3	2
CLO4	3	2	2	3	3	2	3	3	3	3	2	3	3	2	3	2
CLO5	3	2	2	3	3	2	3	3	3	3	2	3	3	2	3	2
CLO6	3	2	2	3	3	2	3	3	3	3	2	3	3	2	3	2

Grading: 3: High level Mapping
2: Medium level Mapping
1: Low level Mapping

Detailed Syllabus:

BOT 266 BIOMECHANICS AND KINESIOLOGY (THEORY)& BOT 267 BIOMECHANICS AND KINESIOLOGY(PRACTICAL)

BOT 266: BIOMECHANICS AND KINESIOLOGY (THEORY)

To enable the student to describe, compare, differentiate and demonstrate an understanding of the principles of Biomechanics & Kinesiology as applied to health and disease.

Unit 1: Mechanics 17Hours

- Introduction to mechanics including motion, forces, parallel forces system vectors.
- Newton's Law of motion, concurrent force system-composition forces, muscle action line etc.
- Centre of Gravity, line of gravity, stability and equilibrium, law of inertia

- Levers, torque, mechanical advantage.
- Moment arm, and anatomic pulleys.

Unit 2: JOINT STRUCTURE AND FUNCTION (20 Hrs.)

- Basic principles of joint design and a human joint.
- Tissues present in human joint including dense fibrous tissue, bone, cartilage and connective tissue.

- Classification of joints.
- Joint function, Kinematics chains and range of motion.
- General effects of injury and disease

Recall anatomy and study the biomechanics of the spine, shoulder girdle, joints of the upper extremity, pelvic girdle and the joints of the lower extremity.

Unit 3: MUSCLE STRUCTURE AND FUNCTION (20 Hrs.)

- Mobility and stability functions of muscle
- Elements of muscles structure and its properties.
- Factors affecting muscle tension.
- Types of muscle contraction and muscles work.
- Classification of muscles and their functions.
- Group action of muscles, co-ordinated movement.

Unit 4: POSTURE AND GAIT (25 HRS.)

- Posture: Definition, factors responsible for posture, relationship of gravity on posture
- Postural in balance: factors responsible for in balance in static and dynamic positions including ergonomics.

- Description of normal gait, determinants of gait, spatio -temporal features, and analysis Gait division: Types, causative factors and analysis.

Unit 5: REGIONAL STRUCTURE AND FUNCTION (50 HRS.)

- The vertebral column
- Shoulder complex
- Elbow complex
- Wrist and Hand complex
- Hip complex
- Knee complex

Ankle and Foot
complex.

Unit 6: MUSCULAR ANALYSIS OF EVERYDAY ACTIVITIES. (12 HRS.)

- Upper extremity
- Lower extremity
- Back
- Total body

BOT 267: BIOMECHANICS AND KINESIOLOGY(PRACTICAL)

Unit 1: Lab hours

Practical knowledge and application of topics covered in theory part

- Measurement of Gait Parameters
- To analyse the structures responsible for stability and mobility of various Joints
- Assessment of static posture with the help of plumb line

- Muscular analysis of ADL activities

Reference Books:

1. C. C. Norkin.,P. K. Levangie., Joint Structure & Function - A Comprehensive Analysis , 5th Edition, Jaypee
2. I. A. Kapandji MD (2107), The Physiology of the Joints. I, II, III, 6th Edition, Churchill Livingstone
3. Peggy a Houghlum (2011), Brunnstrom'S Clinical Kinesiology, 6th Edition, F.A. Davis Company
4. Donald A. Neumann (2016), Kinesiology of the Musculoskeletal System: Foundations for Rehabilitation, 3rd Edition, Mosby
5. Carol A. Oatis (2008), Kinesiology: The Mechanics and Pathomechanics of Human Movement, 2nd Edition, Lippincott Williams and Wilkins

Teaching-Learning Strategies :

- Learning through discussion among the peer group
- Group Projects
- Open ended questions by teacher
- Open ended questions from students
- Experiential Learning
- Learning through Case Studies
- Experiential Learning

Assessment methods and weightages :

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- **Assessment methods**:

  Progress towards achievement of learning outcomes will be assessed using the following:

  - time-constrained examinations; closed-book test.
  - problem-based assignments: practical assignments, laboratory reports. Observation of practical skills.
  - individual project report (case study report); team project report; oral presentations, including seminar presentation; viva voce interviews; computerised adaptive testing; peer and self-assessment.

- **Weightage:**

1.Total Weightage of the subject is of 100 marks. (25 Internal marks + 75 Annual examination marks)
2.In order to pass a paper, a student has to secure at least 50% marks in that paper.

Name of the Academic Program BACHELOR OF OCCUPATIONAL THERAPY (BOT) 2nd YEAR

Course Code: **B.O.T. 268 & B.O.T. 269** Title of the Course: **Ergo-therapeutics -I(theory)&Ergo-therapeutics-I(practical)**

L-T-P: **L**- 144 hours; **P**- 96 hours Credits: NA
(L=Lecture hours, T=Tutorial hours, P=Practical hours)

COURSE LEARNING OUTCOMES (CLOs)

After completing this Course, the students should be able to …….

CLO-1: Understand the rationale for the prescription of safe and effective treatment.
CLO-2: Apply the knowledge to select appropriate assessment / evaluation tools.
CLO-3: Evaluate and create the activity and treatment plan according to impairments, illnesses and disabilities.
CLO-4: Apply and execute various techniques used in occupational therapy.

Mapping of Course Learning Outcomes (CLOs)with Program Learning Outcomes (PLOs) and Program Specific Outcomes (PSOs)

	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5	PLO 6	PLO 7	PLO 8	PLO 9	PLO 10	PLO 11	PLO 12	PSO 1	PSO 2	PSO 3	PSO 4
CLO1	3	2	2	3	3	2	3	3	3	3	2	3	3	2	3	2
CLO2	3	2	2	3	3	2	3	3	3	3	2	3	3	2	3	2
CLO3	3	2	2	3	3	2	3	3	3	3	2	3	3	2	3	2

CLO4	3	2	2	3	3	2	3	3	3	3	2	3	3	2	3	2

Grading: 3: High level Mapping
2: Medium level Mapping
1: Low level Mapping

Detailed Syllabus:

B.O.T 268 ERGOTHERAPEUTICS – I (THEORY)&B.O.T 269 ERGOTHERAPEUTICS – I (PRACTICAL)

B.O.T 268 ERGOTHERAPEUTICS – I (THEORY)

Unit 1:

SECTION I

- Selection of the appropriate assessment / evaluative tools (5 hrs.)
- Theoretical bases of O.T. intervention (Theories and Frames of reference) (10 Hrs.)
- Tools of practice, therapeutic use of self, group process, use of activities, problem – solving, therapeutic adaptations. (8 Hrs.)
- General principles of treatment: focus of treatment, treatment as learning, client's/patient's priorities, baseline information, measurable treatment goals, feedback, graded levels of task difficulty, cuing, recognition of client's/patient's treatment successes & outcomes.(5Hrs.)
- Physical agent modalities: As an adjunct to occupational therapy (5 Hrs.)

Unit 2:

SECTION II

- Types of Movements, Muscle contraction used in exercise, exercise classification & application to activity (5 Hrs.)
- Principle, classification, technique, physiological & therapeutic effects, indications, & therapeutic effects, indications & contribution of therapeutic exercises. (5 Hrs)
- To plan exercise plan according to impairment (5 Hrs.)

Unit 3:

- Specific Treatment Considerations:
- Performance Components
    - Desensitization & sensory re-education (10 Hrs.)
    - Motor re-education (10 Hrs.)
- Maintaining & increasing ROM (5 Hrs.)
- Posture re-education (5 Hrs.)
- Maintaining & improving endurance (5 Hrs.)
- Maintaining & improving coordination and balance (6 Hrs.)
- Motor control, performance & behaviour
- Overview of Sensory - motor approaches(25 hrs)
- Rood's approaches
- Bobath approach
- Brunn-stom's approaches
- Sensory integrative approach
- Motor Relearning Program
    - Hand Rehabilitation (10 Hrs.)
    - Perceptual and cognitive rehabilitation (15 Hrs.)
    - Psychosocial intervention (5 Hrs.)

B.O.T 269 ERGOTHERAPEUTICS – I (PRACTICAL)
Unit 1:

LAB. HOURS: 96 HOURS

- Demonstration of sensory motor –re-education
- Demonstration of coordination exercises

- Demonstration of Balance Training
- Demonstration of cognitive and perceptual rehabilitation
- Demonstration of psychosocial Intervention
- Demonstration of specific sensory motor approaches

Reference Books:

1. Helen .L. Hopkins & Helen. D. Smith (2013), Willard & Spackman's Occupational Therapy, 12th Edition, Lippincott Williams and Wilkins
2. Anne Turner (2002), Occupational Therapy and Physical Dysfunction: Principles, Skills and Practice, 5th Edition, Churchill Livingstone
3. Lorraine Williams (1996), Pedretti, Occupational Therapy for Physical Dysfunction, 4th Edition, Mosby
4. Trombly (2103), Occupational Therapy for Physical Dysfunction, 7th Edition, Lippincott Williams and Wilkins
5. Deena Gardner (2005) , Principles of Exercise Therapy, 4th Edition, CBS
6. Basmajjan & Wolf, Therapeutic Exercises, 5th Edition, Lippincott Williams and Wilkins
7. Kisner (2017), Therapeutic Exercise: Foundations and Techniques, 7th Edition, F A Davis Co
8. O'Sulevan (2006), Physical Rehab. –Assessment and treatment, 5th Edition, F A Davis Co

Teaching-Learning Strategies:

- Learning through discussion among the peer group
- Group Projects
- Open ended questions by teacher
- Open ended questions from students
- Experiential Learning
- Learning through Case Studies
- Experiential Learning

Assessment methods and weightages in brief

- **Assessment methods**:

  Progress towards achievement of learning outcomes will be assessed using the following:

  - time-constrained examinations; closed-book test.
  - problem-based assignments: practical assignments, laboratory reports. Observation of practical skills.
  - individual project report (case study report); team project report; oral presentations, including seminar presentation; viva voce interviews; computerised adaptive testing; peer and self-assessment.

- **Weightage:**

  1.Total Weightage of the subject is of 100 marks. (25 Internal marks + 75 Annual examination marks)

  2.In order to pass a paper, a student has to secure at least 50% marks in that paper**.**

Name of the Academic Program BACHELOR OF OCCUPATIONAL THERAPY (BOT) 2nd YEAR

Course Code: **B.O.T. 270 & B.O.T. 271** Title of the Course: **ERGO-THERAPEUTICS II(THEORY) & ERGOTHERAPEUTICS-II(PRACTICAL)**

L-T-P: **L**- 144 hours, **s**-96 hours Credits: NA
(L=Lecture hours, T=Tutorial hours, P=Practical hours)

COURSE LEARNING OUTCOMES (CLOs)

After completing this Course, the students should be able to ……

CLO-1: Understand, apply, evaluate and create the clinical application of splinting, orthotics, prosthesis.
CLO-2: Understand and apply the knowledge of assistive,adaptive equipment,environmental adaptations and bracing.
CLO-3: Understand and evaluate the maneuver of the wheel chair.
CLO-4: Application of ADL training techniques.
CLO-5: Apply, evaluate and create the assistive and adaptive devices.
CLO-6: Create the treatment plan based on theimpairments, illnesses and disabilities.

Mapping of Course Learning Outcomes (CLOs)with Program Learning Outcomes (PLOs) and Program Specific Outcomes (PSOs)

	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5	PLO 6	PLO 7	PLO 8	PLO 9	PLO 10	PLO 11	PLO 12	PSO 1	PSO 2	PSO 3	PSO 4
CLO1	3	2	2	3	3	2	3	3	3	3	2	3	3	2	3	2

CLO2	3	2	2	3	3	2	3	3	3	3	2	3	3	2	3	2

CLO3	3	2	2	3	3	2	3	3	3	3	2	3	3	2	3	2
CLO4	3	2	2	3	3	2	3	3	3	3	2	3	3	2	3	2
CLO5	3	2	2	3	3	2	3	3	3	3	2	3	3	2	3	2
CLO6	3	2	2	3	3	2	3	3	3	3	2	3	3	2	3	2

Grading: 3: High level Mapping
2: Medium level Mapping
1: Low level Mapping

Detailed Syllabus:

B.O.T 269 ERGOTHERAPEUTICS – II (THEORY)& B.O.T 270 ERGOTHERAPEUTICS – II (PRACTICAL)

B.O.T 269 ERGOTHERAPEUTICS – II (THEORY)

Unit 1:

- U/E splinting (purpose, classification nomenclature, components, fundamental concepts, principles of splinting, application & management) (10 Hrs.)
- Orthotics: (15 hrs)
    - Definition, Classification, Indication, Principles, Materials used. Orthotic components, terminology used.
    - Spinal and lower limb orthotics– Classification, Principles and indication in with brief description of each.
- Prosthesis- Classification, Indication, Principles, Materials used. Components and terminology used. Indication with brief description of each (14 Hrs)

- Assistive & adaptive equipment(including ambulatory & mobility aids wheelchair: assessment of the individual, types of W/c, components, w/c prescription, maintenance, maneuvering, w/c activities) (10 Hrs.)

Unit 2:

- Environmental adaptations (5 Hrs.)
- Technology (including the use of Biofeedback) (5Hrs.)
- Work simplification, energy conservation & joint protection techniques (10 Hrs.)
- Functional bracing, Concept of F.B., Factors to consider while using functional bracing, Application in fracture healing use of F.B. Advantages over the conventional bracing (10Hrs.)

UNIT 3:

- Performance Areas (15 Hrs.)
  - ADL
  - Learning
  - Adaptation
  - ADL methods (transfers, self-care, medication routine health maintenance, socialization, functional communication & mobility, community mobility, emergency response , sexual expression) Principles & specific techniques in ADL training for: Weakness, Low endurance, Limited ROM, In co-ordination, Loss of use of one side of body, Limited vision, Decreased sensation.

- Work and Productive Activities (10 Hrs.)
  - Home management
  - Care of others
  - Educational Activities
  - Vocational activities (including work hardening & Conditioning)
- Play & Leisure activities (15 Hrs.)
  - Improving performance in Play & Leisure activities
  - Role of play in occupational therapy process

UNIT 4:

- Performance Contexts
    - Person – Task – Environmental models (person capabilities, environmental demands, performance discrepancy)

UNIT 5: Models for function & dysfunction (25 Hrs.)

- O.T. approaches to performance discrepancy
- Clinical decision – making guide for P-T-E Interventions
- Target outcomes (adapt, alter, prevent, create, establish or restore)

B.O.T 270 ERGOTHERAPEUTICS – II (PRACTICAL)

Lab hour :96

HOURS UNIT-1

- Identification and use of assistive & adaptive equipment
- Wheel chair-Measurement & manoeuvre
- Cutting template for hand splinting
- Making of two splints
- Demonstration of specific ADL teaching techniques in person with disabled

Unit 2:

- Demonstration of orthosis and prosthesis
- Demonstration of joint protection technique
- Demonstration of energy conservation techniques
- Demonstration of methods of transfers
- Demonstration of specific techniques in ADL training for weakness, low endurance, limited range of motion, Incoordination, one hand methods, limited vision, decreased sensation
- Demonstration of work hardening and work conditioning

- Demonstration of play as medium of OT Treatment

- Identification of environmental Barriers and planning the environmental modification

Reference Books:

1. Helen .L. Hopkins & Helen. D. Smith (2013), Willard & Spackman's Occupational Therapy, 12th Edition, Lippincott Williams and Wilkins
2. Anne Turner (2002), Occupational Therapy and Physical Dysfunction: Principles, Skills and Practice, 5th Edition, Churchill Livingstone
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4. Trombly (2103), Occupational Therapy for Physical Dysfunction, 7th Edition, Lippincott Williams and Wilkins
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7. Kisner (2017), Therapeutic Exercise: Foundations and Techniques, 7th Edition, F A Davis Co
8. O'Sulevan (2006), Physical Rehab. –Assessment and treatment, 5th Edition, F A Davis Co

Teaching-Learning Strategies :

Learning through discussion among the peer group

- Group Projects
- Open ended questions by teacher
- Open ended questions from students
- Experiential Learning
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Assessment methods and weightages:

- **Assessment methods**:

  Progress towards achievement of learning outcomes will be assessed using the following:

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- **Weightage:**

1.Total Weightage of the subject is of 100 marks. (25 Internal marks + 75 Annual examination marks)
2.In order to pass a paper, a student has to secure at least 50% marks in that paper**.**

BACHELOR OF OCCUPATIONAL THERAPY (BOT) 3RD YEAR

Name of the Academic Program BACHELOR OF OCCUPATIONAL THERAPY (BOT) 3RD YEAR

Course Code: BOT 361 **Title of the Course**: **ORTHOPEDICS AND ORTHOSURGERY(THEORY)**

L-T-P: **L**-80 Hours Credits NA
(L=Lecture hours, T=Tutorial hours, P=Practical hours)

COURSE LEARNING OUTCOMES (CLOs)

After completing this Course, the students should be able to: -
CLO-1: Remember the orthopedic conditions causingdisabilities and contracture.
CLO-2: Understand the orthopedic diseases including tremors,fractures, sports injury and nerve injury and their medical and surgical management. CLO-3 :Apply the understanding of terminologies, assessment and examination, surgical techniques of various orthopedic conditions.
CLO-4: Analyze the congenital deformities,developmental disorders and infections of bone.
CLO-5: Understand regional orthopedics including common sports injuries.

Mapping of Course Learning Outcomes (CLOs) with Program Learning Outcomes (PLOs) and Program Specific Outcomes (PSOs)

	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5	PLO 6	PLO 7	PLO 8	PLO 9	PLO 10	PLO 11	PLO 12	PSO 1	PSO 2	PSO 3	PSO 4
CLO1	3	2	3	3	3	3	3	1	1	3	3	2	1	1	3	3

CLO2	3	3	2	2	2	2	2	3	3	2	3	3	3	3	3	3

CLO3	3	3	3	3	3	3	3	3	3	1	1	3	3	3	3	3
CLO4	2	2	2	3	3	3	3	3	3	3	3	3	3	2	2	2
CLO5	3	2	3	3	3	3	3	3	3	3	3	3	3	1	1	2

Grading: 3: High level Mapping
2: Medium level Mapping
1: Low level Mapping

Detailed Syllabus:

BOT 361 ORTHOPAEDICS AND ORTHOSURGERY (THEORY)

Course Description:

This course introduces and enables the student to understand orthopaedic conditions which commonly cause disability and their medical and surgical management.

Course Objectives:

The student will demonstrate an understanding of orthopaedic conditions which commonly cause disability and their medical and surgical management.

Unit 1: **GENERAL LECTURES (4 HOURS)**

- Introduction to Orthopaedics and terminologies
- Approach to the patient and bedside manners
- Clinical History and Examination

Unit 2: **TRAUMATOLOGY (12 HOURS)**

- Definition, Classification, Clinical Features, Differential Diagnosis, Investigations, Medical and Surgical

- Management of the Following
    - General Principles, outline the following
        - Types of Fractures including patterns. Open and closed fractures and fracture
        - Dislocations
        - Differences between dislocation subluxation
        - General & Local signs & symptoms
        - Principles of management-Conservative and Surgical.
        - Prevention and treatment of complications including fracture disease, Volkmann's ischaemic contracture, Sudeck's Atrophy, Carpal Tunnel syndrome. Myositis ossificans, and shoulder-hand syndrome.
        - Functional Bracing
        - Soft Tissue Injuries
    - Upper Limb Trauma
        - Enumerate major long bone fractures and joint injuries.
        - Enumerate the major soft tissue Injuries.
        - Describe their clinical features
        - Principles of management and complications.
    - Lower Limb Trauma
        - Enumerate major long bone fractures and joint injuries.
        - Enumerate major spinal fractures and joint injuries.
        - Enumerate the major soft tissue Injuries.
        - Describe their clinical features. Principles of management and complications.
        - Enumerate the major soft tissue Injuries.
        - Describe their clinical features. Principles of management and complications

- Spinal Trauma

- Poly-trauma
    - Nerve Injuries
    - Vascular Injuries

Unit 3: **AMPUTATIONS (6 HOURS)**

- Classify amputations. List indication for surgery.
- Outline pre-operative, operative and prosthetic management.
- Outline prevention and treatment of complications

Unit 4: **GENERAL ORTHOPAEDICS 10 HOURS**

- Congenital Deformities
    - Outline the clinical features and management of CTEV, CDH, Flat foot, vertical talus, limb deficiency (radial club hand and femoral, tibial and fibular deficiencies meningo-myelocoele, Arthro-gryposis multiplex congenita and Osteogenesis imperfecta, Congenital Torticollis, Spina Bifida, Sprengel's Shoulder, etc.
- Developmental Disorders of Bone
    - Outline the Clinical Features and Management of Cartilage Dysplasia And Bony Dysplasia.
- Infections Of Bones and Joints
    - Outline the Clinical Features, Pathogenesis, Investigations, Differential Diagnosis and Management of Osteomyelitis, Pyogenic Arthritis, Septic Arthritis, etc.
- Tuberculosis of Bones and Joints

- Outline the Clinical Features, Pathogenesis, Investigations, Differential Diagnosis and Management of spine, Hip, Knee, SI Joint, Poncet's Tuberculosis Rheumatism, Tubercular Osteomyelitis, etc.

Unit 5: **REGIONAL ORTHOPEDICS INCLUDING COMMON SPORTS INJURIES (20+12 HOURS)**

Outline the Definition, Classification, Clinical Features, Pathogenesis, Investigations, Differential Diagnosis, Complications and Management of the following conditions:

- Shoulder
  - Tendinitis, Peri Arthritis, Rotator Cuff Injury, Deltoid Fibrosis, Adhesive Capsulitis, Frozen Shoulder, etc.
- Elbow
  - Tennis Elbow, Golfer's Elbow, Recurrent Slipping of Ulnar Nerve, Pulled Elbow, etc.
- Wrist and Hand
  - Ganglion, De-Quervain's Disease, Trigger Thumb and Finger, Carpal Tunnel Syndrome, Dupuytren's Contracture, etc.
- Spine
  - Cervical: Brachial Neuralgia, Brachial Plexus Injury, Thoracic Inlet Syndromes, Torticollis, Cervical Spondylitis, PVID, etc.
  - Thoracic and Lumbar Spine: Deformities of the spine, Spondylolisthesis, Lumbosacral Strain, Lumbar Canal stenosis, Spondylitis, PVID, etc
- Hip
  - Coxa Vara, Slipped Upper Femoral Epiphysis, AVN, etc.
- Knee
  - Deformities, Quadriceps Fibrosis, Recurrent Dislocation of the Patella, Osgood Schlatter's Disease, Loose Bodies, Anterior Knee Pain, Chondromalacia Patellae, etc.
- Foot And Ankle
  - Painful Heel, Plantar Fascitis, Posterior Heel Pain, Deformities, Forefoot pain, metatarsalgia, Tarsal Tunnel Syndrome, etc
- Peripheral Nerve Injuries

- Outline the clinical features and management, including reconstructive surgery of: Radial, median and ulnar nerve lesions.
- Sciatic and lateral popliteal lesions

Brachial Plexus injuries including Erb's, Klumpke's and crutch palsy

Unit 6: **SPECIAL SURGICAL TECHNIQUES(10+6 HOURS)**

- General Principles and Applications of the Following:
- Arthrodesis and Arthroplasty
- Tendon Transfer
- Muscle Lengthening
- Tenotomy
- Tendon repair
- Osteotomy
- Nerve Suturing
- Discectomy
- Spinal Fusion
- Laminectomy
- Soft Tissue Release

Reference Books:

1.David L. Hamblen, A. Hamish, R W Simpson (2010); Adam's Outline of Orthopaedics; 14th Edition, Elsevier; 1-485
2.Jain (2019);Turek's Orthopaedic principles and their applications; 7th Edition; Lippincott Williams and Wilkins
3.Frederick M Azar; S. Terry Canal; James H. Beaty; Campbell's Operative Orthopaedic; 14th Edition; Elsevier
4.Dr. J Maheswari, Vikram A Mhaskar; Essential Orthopaedics; 5th Edition; J. Maheshwari; 1-377
5.Louis Solomon, David Warwick, Selvadurai Nayagam; 2010; Apley's system of Orthopaedics and fracture; 9th Edition; 1-993

Teaching-Learning Strategies:

1. Learning through discussion among the peer group
2. Experiential Learning

3. Reflective Learning

4. Learning by doing group projects
5. Through Field Studie

Assessment methods and weightages in brief:

- **Assessment methods**:

  Progress towards achievement of learning outcomes will be assessed using the following:

  - time-constrained examinations; closed-book test.
  - problem-based assignments: practical assignments, laboratory reports. Observation of practical skills.
  - individual project report (case study report); team project report; oral presentations, including seminar presentation; viva voce interviews; computerised adaptive testing; peer and self-assessment.

- **Weightage:**

  1.Total Weightage of the subject is of 100 marks. (25 Internal marks + 75 Annual examination marks) 2.In order to pass a paper, a student has to secure at least 50% marks in that paper**.**

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Name of the Academic Program: BACHELOR OF OCCUPATIONAL THERAPY (BOT) 3RD YEAR

Course Code: BOT 362 **Title of the Course**: **RADIOLOGY(THEORY)**

L-T-P: **L**- 48 Hours Credits NA
(L=Lecture hours, T=Tutorial hours, P=Practical hours)

COURSE LEARNING OUTCOMES (CLOs)

After completing this Course, the students should be able to:-

CLO-1 Understand differential diagnosis via different radiological tests such as ultrasound, X-rays and MRI. CLO-2 Remember basics of different radiological tests

CLO-3 Apply critical thinking skills for radiology based differential diagnosis. CLO-4 Understand radiology reports.

CLO-5 Analyze radiology reports to enable correlation offinding with the images.

Mapping of Course Learning Outcomes (CLOs)with Program Learning Outcomes (PLOs) and Program Specific Outcomes (PSOs)

	PLO 1	**PLO 2**	**PLO 3**	**PLO 4**	**PLO 5**	**PLO 6**	**PLO 7**	**PLO 8**	**PLO 9**	**PLO 10**	**PLO 11**	**PLO 12**	**PSO 1**	**PSO 2**	**PSO 3**	**PSO 4**
CLO1	3	3	3	3	3	3	2	2	3	3	3	3	3	3	3	3
CLO2	2	3	3	3	3	3	3	2	2	3	3	3	3	3	3	3
CLO3	2	1	2	3	3	3	3	3	3	3	3	3	1	3	3	3

CLO4	3	3	3	3	3	3	3	2	2	2	2	1	1	1	3	3
CLO5	3	3	3	3	3	2	2	2	3	3	3	3	3	3	1	1

Grading: 3: High level Mapping
2: Medium level Mapping
1: Low level Mapping

Detailed Syllabus:

BOT 362 RADIOLOGY (THEORY): 48 HOURS

Unit 1: **Introduction**

- Principles of radiography, identification of gross anatomical features in plain radiographs.

Unit 2: **Radiographs of:**

- Upper Limb, Shoulder region
  - X-ray - Plain Film
  - MRI - Magnetic Resonance Imaging MRI of the shoulder with its excellent soft tissue discrimination offers the best non-invasive way to study the shoulder. MRI gives us direct imaging of the rotator cuff, muscles and tendons of the glenohumeral joint in multiplanar projections
  - Pathologies
    - Osteonecrosis, Osteoarthritis, Ant. Dislocation, Posterior Dislocation, Rotator Cuff Tear, fractures & dislocations
- Elbow & forearm

- X-ray - Plain Film - AP view, Lat view
- Forearm : AP view, Lat view
- Pathologies: Fractures & dislocations

- Wrist - X-ray - Plain Film
  - MRI - Magnetic Resonance Imaging MRI has added a new dimension in the diagnoses of Carpal Tunnel Syndrome at the wrist. The transaxial picture at the level of the hook of the hamate provides an optimum view, enabling evaluation of the tendons and the study of their relationship. The sine qua non of Carpal Tunnel Syndrome is to see edema of the median nerve.
  - Pathologies, Madelung's Deformity, Trapezium Fracture, Failure of Segmentation, Hypertrophic Osteo-arthropathy, Hamate Fracture, Torn Scapholunate Lig.

- Hand:
  - X-ray - Plain Film
  - MRI - Magnetic Resonance Imaging
  - Pathologies, Gamekeeper's fracture, Scleroderma

- Spine
  - X-ray - Plain Film
  - Pathologies : Rheumatoid Arthritis (RA), Odontoid Fx, PIVD, Cervical Ribs,spondylosis, spondylolesthesis, spinal fractures and dislocations , potts spine,ankylosing spondilytis

- Lower Limb
  - Pelvis & hip
  - X-ray - Plain Film
  - Pathologies, Osteomalacia, Fractures of head and neck of femur ,AVN, Paget's Disease, Rickets, Posterior Dislocation, Osteonecrosis, Septic Arthritis, Transforaminal Fracture, Osteonecrosis
- Knee region:
  - Chondrocalcinosis, Fracture, Bone Cyst, Condylar Fracture, Baker's Cyst, Osteoarthritis

- Ankle region & Foot:
  - Septic arthritis, Osteomyelitis, Stress fracture, Osteochondritis

- Dissecans,pott’s fracture,

- Abdomen
    - Plain Radiograph, AP, Lat.

- Thorax
    - Plain Radiograph: male, female
    - Rib fractures, flail rib, lung and pleural diseases, cardiac diseases, v) Head, Face & Neck
    - Plain Radiograph skull, AP, Lat.
    - Plain Radiograph Neck, AP

Unit 3: **RECENT ADVANCES IN DIAGNOSTIC IMAGING**

- Computed tomography: Basic principle-data accumulation-image reconstruction storing the image-viewing the image-evaluation of image - equipment for tomography-table-gantry-x-ray generator-different generations--image quality-patient exposure artefacts.
- Magnetic resonance imaging. Magnetic resonance imaging- basic principle-Instrumentation-Magnetic field gradient coils-Spin echo imaging sequence-multi slice - imaging-multi echo imaging-contrast-multi planar imaging-inversion recovery pulse sequence-signal to noise ratio-fast imaging techniques-safety considerations.
- Digital radiographic imaging: History and development; Theory and Principle Digital fluoroscopy system-Digitized image- digital subtraction techniques- digital image processing- future Equipment developments- Clinical application - PACS (Picture Archival and Communication System)-Digital Image quality-: Laser film printers.

Reference Books:

1. Peter Armstrong, Martin L. Wastie; A concise Textbook of Radiology; Hodder Education Publishers; 1-728
2. David Sutton; 2002; Textbook of Radiology; 1-931

Teaching-Learning Strategies:

1. Learning through discussion among the peer group
2. Experiential Learning

3. Reflective Learning

4. Learning by doing group projects
5. Through Field Studies

Assessment methods and weightages :

- **Assessment methods**:

  Progress towards achievement of learning outcomes will be assessed using the following:

  - time-constrained examinations; closed-book test.
  - problem-based assignments: practical assignments, laboratory reports. Observation of practical skills.
  - individual project report (case study report); team project report; oral presentations, including seminar presentation; viva voce interviews; computerised adaptive testing; peer and self-assessment.

- **Weightage:**

  1.Total Weightage of the subject is of 100 marks. (25 Internal marks + 75 Annual examination marks)
  2.In order to pass a paper, a student has to secure at least 50% marks in that paper**.**

Name of the Academic Program BACHELOR OF OCCUPATIONAL THERAPY (BOT) 3RD YEAR

Course Code: BOT 363 **Title of the Course:** **NEUROLOGY AND NEUROSURGERY(THEORY)**

L-T-P: **L**- 80 Hours Credits NA

(L=Lecture hours, T=Tutorial hours, P=Practical hours)

COURSE LEARNING OUTCOMES (CLOs)

After completing this Course, the students should be able to:-

CLO-1 Understand the neuroanatomy and neurophysiology.

CLO-2 Apply the understanding of various neurological conditions.

CLO-3 Evaluate and planmanagement of neurological patients. .

CLO-4 Apply medical management of neurological conditions toformulate appropriate intervention. CLO-5 Understand indications,precautions and contraindications with respect to clinical presentations.

Mapping of Course Learning Outcomes (CLOs)with Program Learning Outcomes (PLOs) and Program Specific Outcomes (PSOs)

	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5	PLO 6	PLO 7	PLO 8	PLO 9	PLO 10	PLO 11	PLO 12	PSO 1	PSO 2	PSO 3	PSO 4
CLO1	3	3	3	3	3	3	3	2	1	1	2	2	2	2	2	2
1CLO2	3	3	3	3	3	3	3	2	3	3	3	3	3	3	3	3
CLO3	3	3	3	3	3	2	2	2	2	2	1	1	3	3	3	3

CLO4	3	3	3	3	3	3	3	3	3	3	3	2	2	2	2	1
CLO5	2	2	2	2	3	3	3	3	3	3	3	1	3	3	3	3

Grading: 3: High level Mapping
2: Medium level Mapping
1: Low level Mapping

Detailed Syllabus:

BOT 363 :NEUROLOGY AND NEUROSURGERY (THEORY)

Unit 1: 13 HOURS

- Neuroanatomy 4 HOURS
  Review the Basic Anatomy of the Brain and Spinal Cord including
  - Blood supply of the Brain and Spinal Cord
  - Anatomy of the Visual Pathway
  - Connections of the Cerebellum and Extrapyramidal System
  - Relationship of the Spinal Nerves to the Spinal Cord Segments
  - Long tracts of the Spinal Cord
  - The Brachial and Lumbar Plexuses and Cranial Nerves.

- Neurophysiology 4 HOURS
  Neurophysiological basis of:

- Tone and Disorders of Tone and Posture

  - Bladder Control
  - Muscle Contraction
  - Movement and Pain

- Assessment and Evaluative Procedures for the Neurological Patient.
- Principles of Management of a Neurological Patient and Principles of

Diagnosis Unit 2: 20 HOURS

Briefly outline the Etiogenesis, Clinical Features and Management of the following Neurological Disorders:

- Genetic Disorders 3 HRS
  - Cri-du-Chat Syndrome
  - Prader-Willi Syndrome
  - Arthrogryposis Multiplex Congenita
  - Osteo-genesis Imperfecta
  - Cystic Fibrosis
  - Phenylketonuria
- Cerebrovascular Accidents 3 HRS
  - General Classification
  - Thrombotic, Embolic, Haemorrhagic & Inflammatory Strokes
  - Gross Localisation and Sequelae.
- Trauma 3 HRS
  - Localization
  - First Aid and Management of Sequelae of Head Injury and Spinal Cord Injury.
- Diseases of the Spinal Cord 3 HRS
  - Craniovertebral Junction Anomalies
  - Syringomyelia
  - Cervical and Lumbar Disc Lesions
  - Tumors and Spinal Arachnoiditis

  - Cauda Equina
- Demyelinating Diseases (Central and Peripheral) 2 HRS
  - Guillain-Barre Syndrome
  - Acute Disseminated Encephalomyelitis
  - Transverse Myelitis
  - Multiple Sclerosis.
- Disorders of Higher Cortical Function 2 HRS
- Disorders of Cerebellar Function 2 HRS
- Pyramidal and Extra-Pyramidal Disorders- Parkinson's disease, Chorea, Athetosis, Dystonia, Hemiballismus, Spasmodic Torticollis 2 HRS

Unit 3: 15 HORS

Briefly outline the Etiogenesis, Clinical Features and Management of the following Neurological Disorders:

- Developmental and Degenerative Syndromes – Cerebral Palsy, Kernicterus, Hereditary Ataxias, Motor Neuron Disease, Peroneal Muscular Atrophy, Hydrocephalus 3 HRS
- Infections – Pyogenic Meningitis Squeal, tuberculous Infection of Central Nervous System and Poliomyelitis. 3 HRS
- Diseases of the Muscle – Classification, Signs, Symptoms, Progression and Management, Progressive Muscular Dystrophy, Polymyositis, Myasthenia Gravis, Floppy Infant Syndrome 4 HRS
- Peripheral Nerve Disorders – Peripheral nerve injuries, Entrapment neuropathies and Peripheral neuropathies, Traumatic/ Compression or Entrapment Neuropathy, Polyneuritis, GB syndrome, Diabetic Polyneuropathy and Spinal Radiculopathies. Special emphasis on Brachial and Lumbo-sacral Plexuses and Major Nerves – Radial, Ulnar, Median, Femoral and Sciatic nerve 5 HRS

Unit 4: 10 HRS

Epilepsy – Definition, Classification and Management. 2 HRS

- Intracranial Tumors – Broad Classifications, Signs and Symptoms, Management 2 HRS
- Cranial Nerve – Types of Disorders, Clinical Manifestation & Management. 2 HRS

- Tetanus-Pathophysiology, Clinical Features and Management 2 HRS
- Nutritional disorders- Broad Classifications, Signs and Symptoms, Management, Wernicke-Korsakoff Syndrome, nutritional polyneuropathy, Vitamin B12 Deficiency etc. 2 HRS

Unit 5: **NEUROSURGERY 22 HRS**

Review of the Pathological Changes & Principles of Pre & Postoperative Management by Physiotherapy of the following Conditions:

- Common Surgeries of the Cranium & Brain. 4 hours
- Common Surgeries of the Vertebral Column & Spinal Cord. 4 hours
- Common Surgeries of the Peripheral Nerves. 4 hours
- Surgical Interventions in Traumatic Head Injuries. 4 Hours
- Shunts 2 hours
- SOL Resection 2 hours
- Surgical Treatment of Spasticity

Reference Books:

1. Allan Ropper; Martin Samuel; Joshua Klein; Shashank Prasad; 2019; Adam and victor's Principle of Neurology; 11th Edition; McGraw-Hill Education / Medical; 1-1664
2. Kenetth W. Lindsay; 2010; Neurology & Neurosurgery illustrated; Churchill Livingstone; 1-612
3,Vinod K.Paul, Arvind Bagga; Ghai Essential Paediatrics; 9th Edition; CBS Publishers and Distributers

Teaching-Learning Strategies:

1. Learning through discussion among the peer group
2. Experiential Learning

3. Reflective Learning
4. Learning by doing group projects

5. Through Field Studies

- **Assessment methods and weightages:**
- **Assessment methods**:

Progress towards achievement of learning outcomes will be assessed using the following:

- time-constrained examinations; closed-book test.
- problem-based assignments: practical assignments, laboratory reports. Observation of practical skills.
- individual project report (case study report); team project report; oral presentations, including seminar presentation; viva voce interviews; computerised adaptive testing; peer and self-assessment.

- **Weightage:**

1.Total Weightage of the subject is of 100 marks. (25 Internal marks + 75 Annual examination marks)
2.In order to pass a paper, a student has to secure at least 50% marks in that paper**.**

Name of the Academic Program BACHELOR OF OCCUPATIONAL THERAPY (BOT) 3RD YEAR

Course Code: BOT 364 **Title of the Course: PSYCHIATRY (THEORY)**

L-T-P: **L** -80 hours Credits NA
(L=Lecture hours, T=Tutorial hours, P=Practical hours)

COURSE LEARNING OUTCOMES (CLOs)

After completing this Course, the students should be able to

CLO-1 Remember the medical aspect of various psychiatric conditions.
CLO-2 Understand about assessment scales and therapies used for the treatment of psychiatricpatients.
CLO-3 Understand about the psychological and psychosocial issues faced by individual care givers and community .
CLO-4 Analyze the communication skills for effective interaction with patients, health care professionals and care givers.
CLO-5 Evaluate common psychiatric symptoms, effect of medications on control of symptoms and their common side effects.

Mapping of Course Learning Outcomes (CLOs)with Program Learning Outcomes (PLOs) and Program Specific Outcomes (PSOs)

	PLO 1	**PLO 2**	**PLO 3**	**PLO 4**	**PLO 5**	**PLO 6**	**PLO 7**	**PLO 8**	**PLO 9**	**PLO 10**	**PLO 11**	**PLO 12**	**PSO 1**	**PSO 2**	**PSO 3**	**PSO 4**
CLO1	3	3	3	3	3	2	2	3	3	3	2	3	2	3	3	3

CLO2	3	3	3	3	3	3	3	3	3	3	1	1	3	3	3	3

CLO3	3	3	3	3	3	3	3	2	1	2	2	1	2	3	3	3
CLO4	3	3	3	2	2	2	3	3	2	3	3	2	2	3	3	3
CLO5	3	3	3	3	3	3	3	3	3	3	3	3	3	2	1	1

Grading: 3: High level Mapping
2: Medium level Mapping
1: Low level Mapping

Detailed Syllabus:

BOT 364 PSYCHIATRY (THEORY)

Unit 1:

- Brain and Behaviour (microanatomy, neuropsychiatry, brain imaging, neurophysiology & neurochemistry, behavioural genetics) 4 HRS
- Contributions of the psychological sciences to human behaviour (theories, accidents, injuries, ethology, experimental disorders and socio-biology, anthropology etc.) 4 HRS
- Psychometric neuropsychological testing 2 HRS
- Theories of personality and psychopathology and personality disorders 4 HRS
- Clinical examination of the psychiatric patient 3 HRS
- Typical signs and symptoms of psychiatric illness defined 2 HRS
- Classification in psychiatry and psychiatric rating scales 2 HRS

Unit 2:

- Delirium, dementia and amnesic and other cognitive disorders due to a general medical condition 3 HRS

- Neuropsychiatry aspects of HIV and AIDS 2 HRS
- Substance related disorders 2 HRS
- Schizophrenia and related disorders 2 HRS
- Mood disorders 3 HRS
- Anxiety disorders 3 HRS
- Somatoform disorders 3 HRS
- Factitious disorders, Dissimilative disorders 2 HRS
- Human sexuality and sexual disorders and gender identity disorders2 HRS
- Eating disorders 2 HRS
- Normal sleep & sleep disorders 1 HR
- Impulse control disorders not classified elsewhere2 HRS
- Adjustment disorders 2 HRS

Unit 3:

- Psychiatric emergencies 2 HRS
- Psychotherapies (psychoanalysis and psychoanalytic psychotherapy, brief psychotherapy and crisis intervention ,group psychotherapy, combined individual and psychodrama, family therapy, marital therapy, biofeedback, behaviour therapy, hypnosis, cognitive therapy.) 10 HRS
- Biological therapies 2 HRS
- Child psychiatry- assessment, examination and psychological testing 2 HRS

Unit 4:

- Learning disorders 2 HRS
- Developmental coordination disorders 2 HRS
- Mental retardation 1 HR

- Pervasive developmental disorders, attention deficit disorders 2 HRS
- Feeding, eating disorders of infancy or early childhood 1 HR

- Tics disorder 1 HR
- Elimination disorders 1 HR
- Psychiatric treatment of children and adolescents 2 HRS
- Geriatric psychiatry 2 HRS

Reference Books:

1. Neeraj Ahuja; a short textbook of Psychiatry; 7th Edition; JPB; 1-272
2. Benjamin James Sadok, Virginia Alcott Sadok; Kaplan and Sadock's Synopsis of Psychiatry; 11th Edition; Lippincott Williams and Wilkins; 1-1472

Teaching-Learning Strategies:

1. Learning through discussion among the peer group
2. Experiential Learning
3. Reflective Learning
4. Learning by doing group projects
5. Through Field Studies

Assessment methods and weightages:

- **Assessment methods**:

  Progress towards achievement of learning outcomes will be assessed using the following:

  - time-constrained examinations; closed-book test.
  - problem-based assignments: practical assignments, laboratory reports. Observation of practical skills.
  - individual project report (case study report); team project report; oral presentations, including seminar presentation; viva voce interviews; computerised adaptive testing; peer and self-assessment.

- **Weightage:**

1.Total Weightage of the subject is of 100 marks. (25 Internal marks + 75 Annual examination marks) 2.In order to pass a paper, a student has to secure at least 50% marks in that paper**.**

Name of the Academic Program BACHELOR OF OCCUPATIONAL THERAPY (BOT) 3RD YEAR

Course Code: BOT 365 **Title of the Course: Community Medicine and Rehabilitation (THEORY)**

L-T-P: **L**- 48 hours Credits: NA
(L=Lecture hours, T=Tutorial hours, P=Practical hours)

COURSE LEARNING OUTCOMES (CLOs)

After completing this Course, the students should be able to:-

CLO-1 Understand the influence of social and environmental factors on the health of the individual and society.
CLO-2 Analyze and apply occupation based activities appropriate to age and client needs
CLO-3 Evaluate for need of assistive technologic device and assess for application of orthoticsand prosthesis.
CLO-4 Evaluate and intervene individual and population in home and community.
CLO-5 Understand the Psychosocial rehabilitation, driver assessment and simulated training.
CLO-6 Understand the process of evaluation of disability and planning for prevention and rehabilitation of person with disability, role of physiotherapy in national policies for therehabilitation of disabled.
CLO-7 Remember the role of various members of rehabilitation team.
CLO-8 Create and Plan community-based rehabilitation in urban and rural settings.

Mapping of Course Learning Outcomes (CLOs) with Program Learning Outcomes (PLOs) and Program Specific Outcomes (PSOs)

	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5	PLO 6	PLO 7	PLO 8	PLO 9	PLO 10	PLO 11	PLO 12	PSO 1	PSO 2	PSO 3	PSO 4

CLO1	3	3	3	3	3	3	3	2	2	2	3	3	3	3	3	3
CLO2	3	3	3	2	2	2	2	2	3	3	3	3	3	3	1	2
CLO3	3	3	2	3	2	3	3	3	3	3	3	3	2	2	2	3
CLO4	3	3	3	3	3	3	2	3	3	2	2	2	3	3	3	2
CLO5	2	2	3	3	3	2	1	3	3	3	3	3	2	3	3	3
CLO 6	3	3	3	2	3	3	3	3	3	1	3	3	2	3	3	2
CLO 7	3	3	3	3	3	3	3	3	2	3	2	3	2	3	3	3
CLO 8	3	3	3	3	3	3	3	3	2	2	3	3	3	3	3	3

Detailed Syllabus:

BOT 365 COMMUNITY MEDICINE AND REHABILITATION (THEORY)

Unit 1:

SECTION I

- Conceptual framework of Community Medicine and rehabilitation, definitions and various models or rehabilitation. (2 Hrs.)

- Epidemiology of disability with emphases on locomotors disability, its implications on the individual, family, society, economy and the state.
- Describe the following communicable diseases with reference to reservoir, mode of transmission, route of entry and level of prevention. (Poliomyelitis, Meningitis & Encephalitis, Tuberculosis, Filariasis, Leprosy, Tetanus, Measles)
- Describe the Epidemiology of Rheumatic heart disease, cancer, chronic degenerative disease and cerebrovascular accidents. (7 Hrs.)
- Outline the influence of nutritional factors such as Protein Energy Malnutrition, Anemia, Vitamin and mineral deficiency on disability. Preventive aspects of disability and organizational skills to manage it. Define occupational health and list methods of prevention of occupational diseases and hazards. (6 Hrs.)
- Education of the persons with disabilities. (2 Hrs.)
- Vocational Rehabilitation. (4 Hrs.)
- Community Based Rehabilitation and Out -Reach programs to rehabilitate persons with disabilities living in rural areas. Define community based and institution based rehabilitation. Describe the advantage and disadvantage of institution and community based rehabilitation. (5 Hrs.)
- Statutory provisions, schemes of assistance to persons with disability. (3 Hrs.)
- Role of the Voluntary Sector in rehabilitation of the Persons with Disabilities. (3 Hrs.)
- Legislative support for Rehabilitation. Outline the Employees State insurance scheme and its various benefits. Describe the social security measures for protection from occupational hazards, accidents, diseases, and the workman's compensation act. (3 Hrs.)
- Strategies for awareness, public education, and information. List the principles of health education, methods of communication and role of health education in rehabilitation services. (3 Hrs.)
- Basic principles of administration and finance including personnel management and budget preparation and procurement etc. (2 Hrs.)
- Role of technology and manpower for rehabilitation. (2 Hrs.)
- Outline selected National Health Programs

Unit 2:

SECTION-II

DESCRIPTION OF ROLES OF MEMBERS OF THE REHABILITATION TEAM : 4 HRS

- Physician
- Occupational Therapist and Physiotherapist

- Clinical Psychologists

- Social worker
- Prosthetic and Orthotic Engineers
- Audiologists and Speech Therapists
- Hearing aid and ear mound technicians
- Orientation and Mobility instructors
- Teachers for various categories of children with disabilities.
- Vocational instructors, Counselors and Placement Officers
- Multipurpose rehabilitation workers
- The family

Reference Books:

1.David Werner disabled village children; The Hesperian Foundation; 1-654

2.K. Park; park's textbook of preventive and social medicine; 25th Edition;

Teaching-Learning Strategies:

1. Learning through discussion among the peer group
2. Experiential Learning
3. Reflective Learning
4. Learning by doing group projects
5. Through Field Studies

Assessment methods and weightages :

- **Assessment methods**:

  Progress towards achievement of learning outcomes will be assessed using the following:

  - time-constrained examinations; closed-book test.
  - problem-based assignments: practical assignments, laboratory reports. Observation of practical skills.
  - individual project report (case study report); team project report; oral presentations, including seminar presentation; viva voce interviews; computerised adaptive testing; peer and self-assessment.

- **Weightage:**

  1.Total Weightage of the subject is of 100 marks. (25 Internal marks + 75 Annual examination marks) 2.In order to pass a paper, a student has to secure at least 50% marks in that paper**.**

Name of the Academic Program BACHELOR OF OCCUPATIONAL THERAPY (BOT) 3RD YEAR

Course Code: BOT 366 and BOT367 **Title of the Course:** OT in Medical Conditions (Theory) and OT in Medical Conditions(Practical)

L-T-P : **L**-80 hours ; **P**-40 hours Credits NA

(L=Lecture hours, T=Tutorial hours, P=Practical hours)

COURSE LEARNING OUTCOMES (CLOs)

After completing this Course, the students should be able to:-

CLO-1 Remember the medical conditions such as rheumatoid arthritis and HIV and to know the role of an occupational therapist in such cases. CLO-2 Understand the terminology and abbreviations for efficient and effectivechart review and documentation.

CLO-3 Apply the Occupational therapists' scope of practice as well as current assessment,treatment and documentations.

CLO-4 Evaluate the acute care risk factors, complicated diagnosis in the settings and role of occupational therapy within setting.

CLO-5 Understand the assessment and O.T Management of medically related cases.

CLO-6 Evaluate the deformities based on clinical reasoning.

CLO-7 Understand the splint prescription based on clinical reasoning and also learn about joint protection, energy conservation in homesettings.

Mapping of Course Learning Outcomes (CLOs) with Program Learning Outcomes (PLOs) and Program Specific Outcomes (PSOs)

	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5	PLO 6	PLO 7	PLO 8	PLO 9	PLO 10	PLO 11	PLO 12	PSO 1	PSO 2	PSO 3	PSO 4

CLO1	3	3	3	3	3	3	3	2	2	2	3	3	3	3	3	3
CLO2	3	3	2	2	3	3	2	1	3	3	3	3	2	3	3	3
CLO3	3	3	3	3	3	3	3	3	3	2	1	1	3	3	3	3
CLO4	3	3	3	3	3	3	3	2	1	2	2	1	1	2	2	2
CLO5	3	3	3	3	2	2	3	3	3	3	3	3	3	3	3	2
CLO6	3	3	3	3	3	3	2	2	2	3	3	3	3	3	3	1
CLO7	3	3	3	3	3	1	1	2	2	2	2	3	3	3	3	3

Grading: 3: High level Mapping

2: Medium level Mapping

1: Low level Mapping

Detailed Syllabus:

BOT 366 OT IN MEDICAL CONDITIONS (THEORY) & BOT 367 OT IN MEDICAL CONDITIONS (PRACTICAL)

BOT 366 OT IN MEDICAL CONDITIONS (THEORY)

Unit 1:

- Rheumatoid Arthritis: Definition, O.T treatment in R.A., patho-mechanics of hand deformities, rehabilitation of R.A in Acute stage, rehabilitation of R.A in sub-acute stage, rehabilitation of R.A in chronic stage, joint protection techniques, work simplification techniques. (15 Hrs)
- Gerontology: Theories of ageing, ageing & disease, death & dying, O.T treatment in gerontology (10 Hrs)
- Dermatology: Leprosy, O.T in acute & chronic dermatological conditions with psychosocial implications (10 Hrs)
- HIV: Stages of infection, physical psychological & environmental consideration, O.T assessment & treatment. (5 Hrs)
- Pulmonary conditions: Chronic bronchitis, bronchial asthma, emphysema, empyema, COPD, ILD, T.B., lung abscess, occupational lung diseases, related postural deviations and their correction Assessment. Interpretation of pulmonary function tests and their application in rehabilitation. Therapeutic intervention- Assessment of functional performance capacity to perform occupational activities including work, leisure and self-care. Energy conservation techniques and work assessment. Development on pulmonary endurance & physical work capacity.(15 Hrs)

Unit 2:

- Cardiac conditions: Intervention in acute, convalescent and late phases of cardiac illnesses such as ischaemic heart diseases, acute myocardial infarction, hypertension, cardiac myopathies, congenital and acquired heart diseases, valvular diseases, and following interventions like CABG, angioplasties, and valve replacements. Categorization of cardiac patients on the basis of risk factors for exercise prescription. Indications and contra-indications for, work prescription, & activity Cardiac conditioning using treadmill, ergo metre, step-apparatus, Interpretation of signs and symptoms during work assessment Effects of drugs on exercise performance Modification of work and activity programmes with respect to residual cardiac function Assessment on work simulation Work simplification & energy conservation techniques based on ergonomic principles, their uses & application (20 Hrs)
- Haematological conditions: O.T. in Haemophilia and terminal illnesses (5 hrs)

BOT 367 OT IN MEDICAL CONDITIONS (PRACTICAL)
Unit 1: lab hours 40 hours

- Knowledge of assessment and O.T. management of medically related cases

Reference Books:

1.Maureen E. Neistadt, Elizabeth Blesedell Crepeau; Occupational Therapy; 9th Edition; Lippincott Williams & Wilkins; 1-960
2.Heidi Pendleton, Winifred Schultz Krohn; 2017; Practice Skills for Physical Dysfunction; O.T; 8th Edition; Mosby; 1264
3.Catherine Anne Trombly, Anna Deane Scott; 2016; Occupational Therapy in physical Dysfunction; 4th edition; Williams & Wilkins Co;
4.John V. Basmajian, Steve L. Wolf; Therapeutic Exercise; 5th edition; Williams & Wilkins; 1-460
5.C.B Wynn Parry; 1973; Rehabilitation of Hand; 3rd Edition; Butterworth-Heinemann; 1-420
6. Ann Turner, Margaret Foster, Sybil E. Johnson; Occupational Therapy and Physical Dysfunction; 4th edition; Churchill Livingstone; 1-912.

Teaching-Learning Strategies:

1. Learning through discussion among the peer group
2. Experiential Learning
3. Reflective Learning
4. Learning by doing group projects
5. Through Field Studies

Assessment methods and weightages:

- **Assessment methods**:

  Progress towards achievement of learning outcomes will be assessed using the following:

  - time-constrained examinations; closed-book test.
  - problem-based assignments: practical assignments, laboratory reports. Observation of practical skills.
  - individual project report (case study report); team project report; oral presentations, including seminar presentation; viva voce interviews; computerised adaptive testing; peer and self-assessment.

- **Weightage:**

1.Total Weightage of the subject is of 100 marks. (25 Internal marks + 75 Annual examination marks) 2.In order to pass a paper, a student has to secure at least 50% marks in that paper**.**

Name of the Academic Program BACHELOR OF OCCUPATIONAL THERAPY (BOT) 3RD YEAR

Course Code: BOT 368 AND BOT 369 **Title of the Course:** OT in Surgical Conditions (Theory) and OT in Surgical Conditions(Practical)

L-T-P: **L**:80 hours; P 40 hours Credits NA
(L=Lecture hours, T=Tutorial hours, P=Practical hours)

COURSE LEARNING OUTCOMES (CLOs)

After completing this Course, the students should be able to:-

CLO-1 Remember the surgical conditions such as burns and various gynecological conditions and understand the role of an occupational therapist in such cases..
CLO-2 Remember the terminologies and abbreviations for efficient and effective chart review and documentations.
CLO-3 Understand various conditions needing attention focusing on pathology and to Learn about the primary and secondary clinical characteristics and their management.
CLO-4 Apply the knowledge of assessment and Occupational Therapy Management of surgically related cases. CLO-7 Analyze anti deformity positions, pressure garments and orthotics for burns.
CLO-8 Understand the demonstration and identification of different types and partsof prosthesis.

Mapping of Course Learning Outcomes (CLOs)with Program Learning Outcomes (PLOs) and Program Specific Outcomes (PSOs)

	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5	PLO 6	PLO 7	PLO 8	PLO 9	PLO 10	PLO 11	PLO 12	PSO 1	PSO 2	PSO 3	PSO 4

CLO1	3	3	3	3	3	3	3	3	3	3	2	2	2	1	1	1
CLO2	3	3	3	3	3	1	1	2	2	2	3	3	3	3	3	3
CLO3	3	3	3	3	3	3	3	3	3	3	3	3	3	2	2	2
CLO4	3	3	3	3	3	3	3	3	3	2	2	2	2	1	1	3
CLO5	3	3	3	3	3	3	2	2	2	2	3	3	3	3	3	3
CLO6	2	2	2	2	3	3	3	3	3	3	3	3	3	2	2	3
CLO7	3	3	3	3	3	3	3	3	2	2	2	2	3	3	3	3
CLO8	2	2	2	3	3	3	3	3	3	3	3	3	3	3	2	2

Grading: 3: High level Mapping
2: Medium level Mapping
1: Low level Mapping

.

Detailed Syllabus:

BOT 368 OT IN SURGICAL CONDITIONS (THEORY)& BOT 369 OT IN SURGICAL CONDITIONS (PRACTICAL)

BOT 368 OT IN SURGICAL CONDITIONS (THEORY)

Unit 1:

- Role of occupational therapy in the following: Burns: Definition, classification, stages of burns, OT. in burns, pre-graft treatment, post-graft, treatment, rehabilitation of burns. (12 Hrs)
- Amputation: Aetiology, surgical management, special consideration & problems, psychological adjustment, levels of amputation, accessories & component parts of prosthesis, upper & lower extremity prosthetic training program. (12 Hrs)
- Tendon Injuries: Aetiology, Surgical Treatment, O.T. Treatment (10 Hrs)
- Occupational Therapy in blind: Definition and Classification, mobility techniques, communication, skills, sensory re-education, emotional and psychological aspects of blindness, facilities for blind, prevention of blindness (5Hrs)
- Occupational Therapy in deaf, dumb, and other ENT conditions: Definition and classification, communication skills, types and uses of hearing aids, emotional and psychological aspects, facilities for deaf, prevention of deafness, vestibular affectations and re-training.

Unit 2:

- Crush injuries of hand, tendon & nerve injuries & their reconstruction, pre & postoperative management in OT & splinting (10Hrs)
- Cancer rehabilitation: Preventive, restorative, supportive and palliative aspects of radical mastectomy, head and neck cancer. Hospice care. (10 Hrs)
- Vascular Conditions: Peripheral vascular diseases and O.T. (5 Hrs)
- Cardiac Pulmonary surgery (6 Hrs)
- Abdominal surgeries (3 Hrs)
- Obstetrics/Gynaecology conditions

BOT 369 OT IN SURGICAL CONDITIONS (PRACTICAL)

Unit 3: Lab hours: 40 hours

Knowledge of assessment and O.T. management of surgically related patients

Reference Books:

1.Maureen E. Neistadt, Elizabeth Blesedell Crepeau; Occupational Therapy; 9th Edition; Lippincott Williams & Wilkins; 1-960
2.Heidi Pendleton, Winifred Schultz Krohn; 2017; Practice Skills for Physical Dysfunction; O.T; 8th Edition; Mosby; 1264

3.Catherine Anne Trombly, Anna Deane Scott; 2016; Occupational Therapy in physical Dysfunction; 4th edition; Williams & Wilkins Co;

John V. Basmajian, Steve L. Wolf; Therapeutic Exercise; 5th edition; Williams & Wilkins; 1-460

4.C.B Wynn Parry; 1973; Rehabilitation of Hand; 3rd Edition; Butterworth-Heinemann; 1-420

5.Ann Turner, Margaret Foster, Sybil E. Johnson; Occupational Therapy and Physical Dysfunction; 4th edition; Churchill Livingstone; 1-912

Teaching-Learning Strategies:

1. Learning through discussion among the peer group
2. Experiential Learning
3. Reflective Learning
4. Learning by doing group projects
5. Through Field Studies

Assessment methods and weightages:

- **Assessment methods**:

  Progress towards achievement of learning outcomes will be assessed using the following:

  - time-constrained examinations; closed-book test.
  - problem-based assignments: practical assignments, laboratory reports. Observation of practical skills.
  - individual project report (case study report); team project report; oral presentations, including seminar presentation; viva voce interviews; computerised adaptive testing; peer and self-assessment.

- **Weightage:**

  1.Total Weightage of the subject is of 100 marks. (25 Internal marks + 75 Annual examination marks) 2.In order to pass a paper, a student has to secure at least 50% marks in that paper**.**

Name of the Academic Program BACHELOR OF OCCUPATIONAL THERAPY (BOT) 3RD YEAR

Course Code: BOT 370 and BOT 371 **Title of the Course:** OT in work physiology and ergonomics (Theory) and OT in work physiology and ergonomics (Practical)

L-T-P: **L**: 48 hours ;**P**: 32 hours Credits NA
(L=Lecture hours, T=Tutorial hours, P=Practical hours)

COURSE LEARNING OUTCOMES (CLOs)

After completing this Course, the students should be able to:-

CLO-1 Understand different aspects of work physiology and ergonomics and its application and scope in occupational therapyand industry. CLO-2 Evaluate and assess of physical capacity and fitness, aerobic and anaerobic performance.
CLO-3 Apply training equipments and protocols, test performance for work fitness, indications andcontraindications for registering in exercise training.
CLO-4 Evaluate the basic application of ergonomics in industry,the prevention of cumulative trauma disorders, joint pathologies, cardiopulmonary conditions and other conditions as applicable.
CLO-5 Understand the aspects of mental ergonomics, management of anxiety and stress in industry.
CLO-6 Analyze various environmental parameters to identify the architectural barrier in the work environments.
CLO-7 Apply the assessment of anthropometric parameters of human body and know the layout of equipment design of seating.

Mapping of Course Learning Outcomes (CLOs) with Program Learning Outcomes (PLOs) and Program Specific Outcomes (PSOs)

	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5	PLO 6	PLO 7	PLO 8	PLO 9	PLO 10	PLO 11	PLO 12	PSO 1	PSO 2	PSO 3	PSO 4
CLO1	3	3	3	3	3	3	2	2	2	2	3	3	3	3	1	3
CLO2	3	3	3	3	3	3	2	2	2	2	2	1	1	1	3	3
3CLO3	3	3	3	3	3	3	3	3	3	3	3	3	2	2	2	2
CLO4	3	3	3	3	2	2	2	3	3	3	3	3	3	1	3	3
CLO5	3	3	3	3	3	2	2	2	2	2	1	3	3	3	2	3
CLO6	2	2	2	2	1	3	3	3	3	3	3	3	3	3	3	2
CLO7	3	3	3	3	3	3	2	2	2	2	2	3	3	3	3	3

Grading: 3: High level Mapping
2: Medium level Mapping
1: Low level Mapping

Detailed Syllabus:

BOT 370 O.T. IN WORK PHYSIOLOGY AND ERGONOMICS (THEORY)&BOT 371 O.T. IN WORK PHYSIOLOGY AND ERGONOMICS (PRACTICAL)

BOT 370 O.T. IN WORK PHYSIOLOGY AND ERGONOMICS (THEORY)

Unit 1: WORK PHYSIOLOGY: (20 Hrs)

- Physical performance: Aerobic & anaerobic processes, physiology of aerobic and anaerobic exercises. (4Hrs)
- Evaluation of physical performance, tests of maximum aerobic power and anaerobic power, master step test tread mill bicycle aerometry, measurement of oxygen uptake. (3 Hrs)
- Principles & methods of physical training. (4 Hrs)
- Applied work physiology: energy expenditure at work, rest, leisure & fatigue. (4 Hrs)
- Nutrition and physiology performance. (2 Hrs)
- Temperature regulation. (1Hrs)
- Factors affecting performance.

Unit 2: ERGONOMICS: (28 Hrs)

- Definition & areas of ergonomics (2 Hrs)
- Anthropometry- definition, facets, purpose and methods of carrying out studies, principles in application (2 Hrs)
- Environmental physiology- types of environment their effect on human body (2 Hrs)
- Man-machine oriented topics- functioning of man-machine system, information-processing theory. (2 Hrs)
- Design of workspace and work equipment. (7 Hrs)
- Layout of equipment, design of seating, displays, characteristics of control & compatibility. (6 Hrs)
- Environmental factors: temperature, humidity, noise, vibration, and visual environment pollution. (2 Hrs)
- Safety factors- accidents and their prevention (2 Hrs)
- Scope of ergonomics in modern industrial society (1 Hrs)
- Application of ergonomics in O.T.

BOT 371 O.T. IN WORK PHYSIOLOGY AND ERGONOMICS (PRACTICAL)

Unit 1: LAB HOURS 32 HOURS

- Assessment of various environmental parameters to identify the architectural Barrier in the work environments.
- Assessment of anthropometric parameters of human body.

Reference Books:

1. Karen Jacobs; 2007; Ergonomics for Therapist; 3rd Edition; Mosby; 1-480
2. Per-Olof Astrand, Kaare Rodahl, Hans A. Dahl, Sigmund B. Stromme; 2003; Textbook of Work Physiology: Physiological Bases of Exercise; 4th Edition; Human Kinetics Publishers; 1-656

Teaching-Learning Strategies

1. Learning through discussion among the peer group
2. Experiential Learning
3. Reflective Learning
4. Learning by doing group projects
5. Through Field Studies

Assessment methods and weightages :

- **Assessment methods**:

Progress towards achievement of learning outcomes will be assessed using the following:

- time-constrained examinations; closed-book test.
- problem-based assignments: practical assignments, laboratory reports. Observation of practical skills.
- individual project report (case study report); team project report; oral presentations, including seminar presentation; viva voce interviews; computerised adaptive testing; peer and self-assessment.

- **Weightage:**

1.Total Weightage of the subject is of 100 marks. (25 Internal marks + 75 Annual examination marks) 2.In order to pass a paper, a student has to secure at least 50% marks in that paper**.**

Name of the Academic Program BACHELOR OF OCCUPATIONAL THERAPY (BOT) 3RD YEAR

Course Code: BOT 372 **Title of the Course:** Clinical Training(Practical)

L-T-P :**P-** 464 hours Credits NA
(L=Lecture hours, T=Tutorial hours, P=Practical hours)

COURSE LEARNING OUTCOMES (CLOs)

After completing this Course, the students should be able to:-

CLO-1 : Evaluate, assess and identify the basic understanding of human body on structural, functional basis .They will also be able to relate functional performance and use clinical reasoning skills in problem solving anddevelop need-based strategies to address problems.

CLO-2 Develop and apply skills in various disciplines like pediatrics, musculoskeletal, neurology, psychiatry etc...

CLO-3 Apply training equipments and protocols, test performance for work fitness, indications andcontraindications for registering in exercise training.

CLO-4 Apply appropriate advanced therapeutic activities and modalities for effective occupational therapy intervention to enhance ability of individual.

CLO-5 Analyze various environmental parameters to identify the architectural barrier in the work environments.

CLO-6 Apply the assessment of anthropometric parameters of humanbody and know the layout of equipment design ofseating.

Mapping of Course Learning Outcomes (CLOs) with Program Learning Outcomes (PLOs) and Program Specific Outcomes (PSOs)

	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5	PLO 6	PLO 7	PLO 8	PLO 9	PLO 10	PLO 11	PLO 12	PSO 1	PSO 2	PSO 3	PSO 4

CLO1	3	2	3	3	2	3	3	3	3	2	2	3	3	2	2	3
CLO2	3	3	3	3	3	3	2	3	2	3	2	3	3	3	3	3
CLO3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
CLO4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
CLO5	3	3	2	3	3	2	2	3	2	3	1	2	3	3	3	2
CLO6	3	3	2	3	2	3	3	3	3	3	3	3	3	3	3	2

Grading: 3: High level Mapping
2: Medium level Mapping
1: Low level Mapping

Detailed Syllabus:

BOT 372 Clinical

training(practical) Teaching-

Learning Strategies :

1. Learning through discussion among the peer group
2. Experiential Learning
3. Reflective Learning

4. Learning by doing group projects
5. Through Field Studies

Assessment methods and weightages :

- **Assessment methods**:

  Progress towards achievement of learning outcomes will be assessed using the following:

  - time-constrained examinations; closed-book test.
  - problem-based assignments: practical assignments, laboratory reports. Observation of practical skills.
  - individual project report (case study report); team project report; oral presentations, including seminar presentation; viva voce interviews; computerised adaptive testing; peer and self-assessment.

- **Weightage:**

  1.Total Weightage of the subject is of 100 marks. (25 Internal marks + 75 Annual examination marks) 2.In order to pass a paper, a student has to secure at least 50% marks in that paper**.**

BACHELOR OF OCCUPATIONAL THERAPY (BOT) 4TH YEAR

Name of the Academic Program BACHELOR OF OCCUPATIONAL THERAPY (BOT) 4TH YEAR

Course Code **BOT 461** Title of the Course:- **RESEARCH METHODOLOGY AND BIOSTATISTICS(THEORY)**

L-T-P: **L**= 80 Credit Hours: NA.
(L=Lecture hours, T=Tutorial hours, P=Practical hours)

COURSE LEARNING OUTCOMES (CLOs)

CLO-1 **Understand the basics and fundamentals of research including the design and implementation of Occupational therapy related research studies**

CLO 2 Describe basic concepts of Biostatistics & its need for professional practice & research.

CLO 3 Analyse the basic function and working of analytical instruments used in research.

CLO 4 Apply bio-statistical tests using computers and software for analysis and interpretation of the result and prepare papers.

Mapping of Course Learning Outcomes (CLOs)with Program Learning Outcomes (PLOs) and Program Specific Outcomes (PSOs)

	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10	PLO11	PSO1	PSO2	PSO3	PSO4
CLO1	3	2	2	2	2	3	3	2	3	2	2	2	2	3	2
CLO2	2	3	2	3	2	3	2	2	3	2	2	3	3	3	2
CLO3	2	2	3	2	3	2	3	2	3	2	2	2	3	2	3
CLO4	2	3	3	2	2	3	2	3	2	3	2	3	3	2	2

Grading: 3: High level Mapping
2: Medium level Mapping
1: Low level Mapping

Detailed Syllabus:

BOT 461 RESEARCH METHODOLOGY AND BIOSTATISTICS (THEORY)

To familiarize the student with the basics of the research process

Unit 1: **Research in Occupational Therapy (10 Hours)**

- Introduction and need of research in Occupational Therapy
- Definition, Concept, Characteristics, Purpose, Approaches of research
- Barriers in Physiotherapy research, Web source of Occupational Therapy research

- **Unit 2 Research Fundamentals (10 Hours)**
  - Measurement scales
  - Methods of data collection
  - Pilot study, types of Error in research
  - Variables-Definition and types
  - Reliability and Validity- Definition, types and threats to internal and external validity of measurements.
  - Drawing tables graphs, Master chart

Unit 3 Writing research proposal, Critiquing published research Articles(15 Hours)

- Defining problems,
- Review of Literature and level of evidence
- Formulating research question, Hypothesis, Operational definition
- Sampling techniques
- Inclusion and exclusion criteria
- Data collection and analysis
- Result, Interpretation, discussion
- Ethical issues in Research, Elements of Informed Consent.

Unit 2: … **Scientific writing and Publication (6 hours)**

- Role of author, Guide and Coauthors
- Structure, style and content-
- Style manuals (APA, MLA, Vancouver); Citation styles, footnotes, references, evaluation of researches, impact factor, indexed journals.

Unit 3: …**Biostatistics (24 hours)**

- Definition and Scope
- Collection of Data
- Sampling methods

- Variable: Discrete and continuous.

- **Presentation of Data**: Classification and tabulation.

- **Diagrams and graphs**: Bar, pie, Histogram, line graph.
  - Concept of statistical population and sample characteristics of frequency distribution, power analysis for determining sample size

- **Measures of Central tendency**:
  - Mean, Median, Mode & Weighted Arithmetic Mean
  - Measures of Dispersion: Range, Quartile deviation
  - Mean deviation & Standard deviation - Correlation and Regressio

  - **Test of significance**:
  - Testing hypothesis, Techniques, using statistics, some basic maths, symbols in statistics
  - Matching the research design to the statistical test
  - Non-parametric tests for same - & matched – subjects design
  - Parametric tests for same - & matched – subjects design
  - Non – parametric tests for different – (unrelated) subjects design
  - Parametric tests for different – (unrelated) subjects design
  - Non – parametric & parametric tests for correlation designs
  - Estimation
  - Analysis of variance

Reference Books:

1. John C Bailar III and Frederick Mosteller, Medical uses of statistics-2nd Edition by ERC press
2. Khan & Khanum, Fundamentals of Biostatistics- Ist Edition by Ukaaz Publications

3. K.V Rao Biostatistics Ist Edition Jaypee Publishers
4. K.R Sharma Research Methodology, Ist Edition, Atlantic Publishers

5. Carolyn M.H, Research Methods for clinical Therapist, 5th Edition by Churchill Livingstone
6. E Domholdt , Physical Therapy Research:Principals and application Ist Edition WB Sauunders K ltd.

Teaching-Learning Strategies :

- Learning by doing,
- Learning through discussion among the peer group,
- Learning through Case Studies and Group Projects,
- Collecting questions in a Question Bowl taken around the class by the teacher or one of the students and discussion on those questions
- Preparation of question bank by students at various cognitive levels

Assessment methods and weightages :

- **Assessment methods**:

  Progress towards achievement of learning outcomes will be assessed using the following:

  - time-constrained examinations; closed-book test.
  - problem-based assignments: practical assignments, laboratory reports. Observation of practical skills.
  - individual project report (case study report); team project report; oral presentations, including seminar presentation; viva voce interviews; computerised adaptive testing; peer and self-assessment.

- **Weightage:**

  1.Total Weightage of the subject is of 100 marks. (25 Internal marks + 75 Annual examination marks)
  2.In order to pass a paper, a student has to secure at least 50% marks in that paper**.**

Name of the Academic Program BACHELOR OF OCCUPATIONAL THERAPY (BOT) 4TH YEAR

Course Code **BOT 462** Title of the Course: **ORGANIZATION ADMINISRATION AND ETHICS (THEORY)**

L-T-P:**L** – 80 Credits: NA
(L=Lecture hours, T=Tutorial hours, P=Practical hours)

COURSE LEARNING OUTCOMES (CLOs)

After completing this Course, the students should be able to …….

CLO 1: Describe methods of administration in a occupational therapy department CLO 2: Explain Major ethical principles applied to moral issues in healthcare
CLO 3 Distinguish Professional and government licensing bodies ,accreditation and education standards
CLO 4: Apply the principles and methods of organization, administration and work study as appropriate to the OT delivery system and to patient treatment and training.

Mapping of Course Learning Outcomes (CLOs)with Program Learning Outcomes (PLOs) and Program Specific Outcomes (PSOs)

	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10	PLO11	PSO1	PSO2	PSO3	PSO4
CLO1	2	3	2	3	2	3	3	2	3	2	2	2	2	3	2

CLO2	2	3	2	3	2	3	3	2	3	2	2	3	3	3	2
CLO3	2	2	3	2	3	2	3	2	3	2	2	2	3	2	3
CLO4	2	3	3	2	2	3	3	3	2	3	2	3	3	3	2

Grading: 3: High level Mapping
2: Medium level Mapping
1: Low level Mapping

Detailed Syllabus:

BOT462 ORGANIZATION, ADMINISTRATION AND ETHICS (THEORY)

UNIT-1 (23 HRS)

- Planning & Organization: Planning Cycle, Principles of Organizational Charts, Resource and Quality management, Planning change (6 HRS)
- Financial issues including budget and income generation (2HRS)
- Hospital Management: Hospital Organization, Staffing, information, Communication and co-Ordination with other. Services of hospital, Cost of service, Monitoring and Evaluation. (4HRS)
- Self-Management
  - Preparing for first job (5HRS)
  - Time Management (3HRS)
  - Career development (3HRS)
  -

UNIT -II (36HRS)

- Describe methods of administration in a occupational therapy department (3HRS)
    - Records: their purpose eg. Attendance, statistics, inventory, stock.
    - Maintenance of records eg. Methods of community and institutional based Departments (CBR & IBR)
    - Referrals- purpose and types of referral
- Demonstrate administration of the following (3HRS)
    - Store keeping materials, inventory records, purchase ordering petty cash accounting.
    - General maintenance of equipment, furniture, buildings, costing of splints/ aids/ equipment/ articles/made in occupational therapy
- Describe and demonstrate: (3HRS)
    - Types of correspondence
    - Methods of filing.
- Describe methods for care of equipment and materials (3HRS)
- Discuss budgeting- including items for an annual budget. (3HRS)
- Discuss considerations for constructions of a new department, and modification of an old
- Department including: (6HRS)
    - Space required
    - Allotment of space, eg suitability for access, plumbing requirements & circulation of air.
- Plan assessment forms eg. Pre-vocational ADL hand function & higher functions for initial evaluation and progress recording. (4HRS)
- Outline method of writing occupational therapy department annual reports. Calculate monthly and annual statistics. Make plans for future requirements eg. Consider staff patient ratio, equipment and staff requirements. (3HRS)
- Plan to organize picnic or sports program for patients. (2HRS)
- Outline legal aspects related to rehabilitation: Medico Legal cases, Workman's' Compensation Act & Insurance Facilities & Other financial benefits available for the disabled. (4HRS)
- Outline safety precautions in occupational therapy (2HRS)

UNIT III

Describe methods of administration in a occupational therapy department (3 HRS)

- Records: their purpose eg. Attendance, statistics, inventory, stock.

- Maintenance of records eg. Methods of community and institutional based Departments (CBR & IBR)
- Referrals- purpose and types of referral
- Demonstrate administration of the following (3 HRS)
- Store keeping materials, inventory records, purchase ordering petty cash accounting.
- General maintenance of equipment, furniture, buildings, costing of splints/ aids/ equipment/ articles/made in occupational therapy Describe and demonstrate: (3 HRS)
- Types of correspondence
- Methods of filing.

Describe methods for care of equipment and materials (3 HRS)
Discuss budgeting- including items for an annual budget. (3 HRS)
Discuss considerations for constructions of a new department, and modification of an old Department including: (6 HRS)

- Space required
- Allotment of space, eg suitability for access, plumbing requirements &circulation of air.

Plan assessment forms eg. Pre-vocational ADL hand function & higher functions for initial evaluation and progress recording. (4 HRS)
Outline method of writing occupational therapy department annual reports. Calculate monthly and annual statistics. Make plans for future requirements eg. Consider staff patient ratio, equipment and staff requirements. (3 HRS)
Plan to organize picnic or sports program for patients. (2 HRS)
Outline legal aspects related to rehabilitation: Medico Legal cases, Workman's' Compensation Act & Insurance Facilities & Other financial benefits available for the disabled. (4 HRS)
Outline safety precautions in occupational therapy (2 HRS)

SECTION III- Occupational Ethics **(21HRS)**

- History & Philosophy of occupational therapy (2HRS)
- Rules of professional conduct & code of ethics. (2HRS)
- Major ethical principles applied to moral issues in health care (2HR)
- Relationship with patient , co-professionals and other professionals. (2HR)
- Confidentiality and responsibility (2HR)
- Provision of services and advertising (2HR)
- Sale of goods. (2HR)

- Personal and professional standards. (2HRS)
- Professional and government licensing bodies, accreditation and education standards. (1HR)
- Laws and legal concepts (2HR)
- Law - protection from malpractice claim (1HR)
- Consumer protection act, liability and documentation. (1HR)

Reference Books:

1. H.Hopkins & H.Smith ,Willard & Speckman Occupational Therapy 5th Edition Lippincott Williams and Wilkins publishers 976 pages
2. Ann. Turner, Introduction to Occupational Therapy 2nd Edition, Churchill Livingstone 608 pages
3. L.V.Pedritti O.T. Practice skills for Physical Dysfunction 7th Edition Mosby Publishers
4. Trombly, Occupational Therapy for Physical Dysfunctions –3rd and 4th Edn. Lippincott Williams and Wilkins publishers 942 pages
5. O'Sullivan, Physical rehab. – Assessment & Treatment, 3rd Edition FA Davis Company, 830 pages

Teaching-Learning Strategies:

- Learning by doing,
- Learning through discussion among the peer group,
- Learning through Case Studies and Group Projects,
- Collecting questions in a Question Bowl taken around the class by the teacher or one of the students and discussion on those questions
- Preparation of question bank by students at various cognitive levels

Assessment methods and weightages:

- **Assessment methods**:

  Progress towards achievement of learning outcomes will be assessed using the following:

  - time-constrained examinations; closed-book test.

- problem-based assignments: practical assignments, laboratory reports. Observation of practical skills.

- individual project report (case study report); team project report; oral presentations, including seminar presentation; viva voce interviews; computerised adaptive testing; peer and self-assessment.

- **Weightage:**

1.Total Weightage of the subject is of 100 marks. (25 Internal marks + 75 Annual examination marks)

2.In order to pass a paper, a student has to secure at least 50% marks in that paper**.**

Name of the Academic Program BACHELOR OF OCCUPATIONAL THERAPY (BOT) 4TH YEAR

Course Code: BOT 463& BOT464 Title of the Course: OT IN ORTHOPAEDICS (THEORY)& OT IN ORTHOPAEDICS (PRACTICAL)

LTP: L-80HOURS , P 64 HOURS Credit Hours : NA
(L=Lecture hours, T=Tutorial hours, P=Practical hours)

COURSE LEARNING OUTCOMES (CLOs)

After completing this Course, the students should be able to

CLO 1 -Understand Injuries and pathological conditions of vertebral column and spinal cord, spinal orthotics and O.T. Management.
CLO 2- Explain common principles of treatment of musculoskeletal conditions.
CLO 3 -Describe OT. Management of congenital anomalies
CLO 4 -Contrast Occupational Therapy evaluation and assessment of Orthopaedic conditions non-standardized methods CLO 5 -Prepare goals for intervention based on the Models and Frames of references
CLO 6 -Evaluate Orthopaedic clinical evaluation and treatment
CLO 7 -Clinical demonstration of the approaches used Treatment planning, implementation, termination and follow-up.

Mapping of Course Learning Outcomes (CLOs) with Program Learning Outcomes (PLOs) and Program Specific Outcomes (PSOs)

	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5	PLO 6	PLO 7	PLO 8	PLO 9	PLO 10	PLO 11	PLO 12	PSO 1	PSO 2	PSO 3	PSO 4

CLO1	3	3	2	3	3	3	2	3	2	3	3	3	2	3	3	2

CLO2	2	2	3	3	2	2	3	3	3	2	3	2	3	3	2	3
CLO3	1	3	3	2	1	3	3	2	3	2	3	2	2	2	3	3
CLO4	2	1	2	3	2	1	2	3	2	3	3	1	2	3	3	3
CLO5	3	2	1	2	3	2	1	2	3	2	2	3	1	2	3	3
CLO6	3	3	2	2	3	3	2	2	3	2	2	3	3	2	2	2
CLO7	2	3	2	2	2	3	2	2	3	2	2	3	1	2	3	2

Grading: 3: High level Mapping
2: Medium level Mapping
1: Low level Mapping

Detailed Syllabus:

BOT463: OT IN ORTHOPAEDICS (THEORY)&BOT464: OT IN ORTHOPAEDICS (PRACTICAL)

BOT463: OT IN ORTHOPAEDICS (THEORY)

UNIT - 1

- Orthopaedic clinical evaluation and treatment. (10 hrs)
- O.T. for fractures of upper and lower limbs, management of complications, internal fixation, external fixation, excision and replacement arthro-plasty (9 hrs)
- Injuries at and around joints of upper and lower extremity, arthroscopic and surgical intervention O.T. treatment. (9 hrs)

- Occupational Therapy management of Erb's Palsy, brachial plexus palsy and peripheral nerve injuries. (9 hrs)

UNIT II

- Injuries and pathological conditions of vertebral column and spinal cord, spinal orthotics and O.T. Management. (6 hrs)
- Poliomyelitis and cerebral palsy. Reconstructive surgeries including limb lengthening procedures and orthotic management. (6hrs)
- Arthritis, Surgical and rehabilitation programme. (10 hrs)
- Cumulative trauma disorder and application of ergonomic principles in management of orthopaedic condition. (3 hrs)
- Metabolic disease of bone like Rickets, Osteomalacia, Osteoporosis, gout, and O.T. Management. (2 hrs)
- OT. Management of congenital anomalies (6hrs)
- Special Test (region wise) (10hrs)

BOT464: OT IN ORTHOPAEDICS (PRACTICAL)

UNIT I : LAB HOURS: 64 HOURS (64 Hours)

- Occupational Therapy evaluation and assessment of Orthopaedic conditions using standardized and non-standardized methods.
- Setting goals for intervention based on the Models and Frames of references
- Clinical demonstration of the approaches used
- Treatment planning, implementation, termination and follow-up.

Reference Books:

1. H.Hopkins & H.Smith ,Willard & Speckman Occupational Therapy 5th Edition Lippincott Williams and Wilkins publishers 976 pages
2. Ann. Turner, Introduction to Occupational Therapy 2nd Edition, Churchill Livingstone 608 pages
3. L.V.Pedritti O.T. Practice skills for Physical Dysfunction 7th Edition Mosby Publishers

4. Dina Gardiner Principles of Exercise Therapy 4th Edition CBS publishers

5. Basmajjan & Wolf Therapeutic Exercises 5th Edition Lippincott Williams and Wilkins publishers 617 pages
6. Trombly, Occupational Therapy for Physical Dysfunctions –3rd and 4th Edn. Lippincott Williams and Wilkins publishers 942 pages.

Teaching-Learning Strategies :

- Learning by doing,
- Learning through discussion among the peer group,
- Learning through Case Studies and Group Projects,
- Collecting questions in a Question Bowl taken around the class by the teacher or one of the students and discussion on those questions
- Preparation of question bank by students at various cognitive levels

Assessment methods and weightages :

- **Assessment methods**:

  Progress towards achievement of learning outcomes will be assessed using the following:

  - time-constrained examinations; closed-book test.
  - problem-based assignments: practical assignments, laboratory reports. Observation of practical skills.
  - individual project report (case study report); team project report; oral presentations, including seminar presentation; viva voce interviews; computerised adaptive testing; peer and self-assessment.

- **Weightage:**

  1.Total Weightage of the subject is of 100 marks. (25 Internal marks + 75 Annual examination marks)
  2.In order to pass a paper, a student has to secure at least 50% marks in that paper**.**

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Name of the Academic Program: - BACHELOR OF OCCUPATIONAL THERAPY (BOT) 4TH YEAR

Course Code: **BOT465 & BOT 466** Title of the Course: **OT IN NEUROLOGY AND PEDIATRICS (THEORY)& OT IN NEUROLOGY AND PEDIATRICS (PRACTICAL)**

LTP: **L** = 80 HOURS ; P =64 HOURS Credit Hours: NA
(L=Lecture hours, T=Tutorial hours, P=Practical hours)

COURSE LEARNING OUTCOMES (CLOs)

After completing this Course, the students should be able to

CLO 1 - Understand Current neurophysiological theories and their application in O.T. in the various neurological problems in children, adolescents and adults including defects and Injuries to the brain and spinal cord
CLO 2 Describe basic Preventive, curative and rehabilitative Occupational Therapy for common neurological conditions
CLO 3 Explain Management of dysphagia normal physiology of swallowing, describe disease process resulting into dysphagia CLO 4 Evaluate the investigative procedures, application of neurophysiologic principles in Occupational Therapy.
CLO 5 Develop goals for intervention based on the Models and Frames of reference.
CLO 7 Plan Treatment, implementation, termination and follow-up.

CLO 8 Summarize an understanding of neurological conditions causing disability and their management.

Mapping of Course Learning Outcomes (CLOs) with Program Learning Outcomes (PLOs) and Program Specific Outcomes (PSOs)

	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5	PLO 6	PLO 7	PLO 8	PLO 9	PLO 10	PLO 11	PLO 12	PSO 1	PSO 2	PSO 3	PSO 4
CLO1	2	3	3	3	2	3	2	2	2	3	3	2	2	3	2	2
CLO2	2	3	2	2	2	3	2	3	3	3	2	2	3	2	3	2
CLO3	1	3	2	1	1	2	3	3	2	3	2	2	3	2	3	2
CLO4	2	3	3	3	3	2	3	2	3	2	3	2	3	2	3	3
CLO5	2	2	3	2	2	3	3	2	3	2	3	2	3	2	3	2
CLO6	2	2	3	2	2	2	2	3	3	3	2	3	2	3	2	3
CLO7	2	3	3	3	3	2	1	3	1	3	2	2	2	3	2	3
CLO8	2	2	3	2	3	2	3	3	2	1	2	2	3	3	2	2

Grading: 3: High level Mapping
2: Medium level Mapping
1: Low level Mapping

Detailed Syllabus:

BOT 465 OT IN NEUROLOGICAL & PAEDIATRIC CONDITIONS (THEORY) & **BOT 466 OT IN NEUROLOGICAL & PAEDIATRIC**

CONDITIONS (PRACTICAL)

BOT 465 OT IN NEUROLOGICAL & PAEDIATRIC CONDITIONS

(THEORY) UNIT 1 (80 HOURS)

- Neurophysiological principles applied to therapeutic procedures in the treatment of pyramidal, extrapyramidal, cerebellar and lower motor neuron lesions. (5 hrs)
- Current neurophysiological theories and their application in O.T. in the various neurological problems in children, adolescents and adults including defects and Injuries to the brain and spinal cord. (10hrs)
- Cognito-motor perceptual skills: Evaluation, Scales used, training and models of cognitive rehabilitation. (5 hrs)
- Preventive, curative and rehabilitative Occupational Therapy for common neurological conditions,
    - such as stroke, traumatic head injury, brain tumours, cortical lesions, Parkinson's disease, chorea,
    - Athetosis, Cerebellar ataxia, Multiple Sclerosis, Motor Neuron Disease, Brain functions, Human
    - Immuno-deficiency virus. Syringomyelia, Transverse myelitis, Tabes dorsalis, Spinal cord tumours,
    - Peripheral neuropathies, Myopathy, Myasthenia gravis, Spinal cord Injuries. (35 hrs)
- UNIT II
- Management of dysphagia normal physiology of swallowing, describe disease process resulting into
    - dysphagia, state guidelines for assessment & treatment of patients with dysphagia. (5 hrs)
- Occupational Therapy for Developmental Disabilities: (20 hrs)
        - Occupational Therapy with neonates and infants.
        - Cerebral Palsy: Classification, etiology and O.T. approaches including neurodevelopment therapy, preschool training, O.T. in the school system, Home Care Programme.
        - Common Genetic Disorders: Neural Tube Defects.
        - Sensory Integrative therapy.

BOT 466 OT IN NEUROLOGICAL & PAEDIATRIC CONDITIONS
(PRACTICAL) Unit 1 LAB HOURS (64 HOURS)

- Occupational Therapy evaluation and assessment of Neurological conditions using standardized and non-standardized methods.
- Setting goals for intervention based on the Models and Frames of references
- Clinical demonstration of the approaches used

- Treatment planning, implementation, termination and follow-up.

Reference Books:

1. H. Hopkins & H.Smith ,Willard & Speckman Occupational Therapy 5th Edition Lippincott Williams and Wilkins publishers 976 pages
2. Ann. Turner, Introduction to Occupational Therapy 2nd Edition Churchill Livingstone 608 pages

Teaching-Learning Strategies:

- Learning by doing,
- Learning through discussion among the peer group,
- Learning through Case Studies and Group Projects,
- Collecting questions in a Question Bowl taken around the class by the teacher or one of the students and discussion on those questions
- Preparation of question bank by students at various cognitive levels

Assessment methods and weightages:

- **Assessment methods**:

  Progress towards achievement of learning outcomes will be assessed using the following:

  - time-constrained examinations; closed-book test.
  - problem-based assignments: practical assignments, laboratory reports. Observation of practical skills.
  - individual project report (case study report); team project report; oral presentations, including seminar presentation; viva voce interviews; computerised adaptive testing; peer and self-assessment.

- **Weightage:**

  1.Total Weightage of the subject is of 100 marks. (25 Internal marks + 75 Annual examination marks)
  2.In order to pass a paper, a student has to secure at least 50% marks in that paper**.**

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Name of the Academic Program BACHELOR OF OCCUPATIONAL THERAPY (BOT) 4TH YEAR

Course Code: **BOT 467& BOT 468** Title of the Course: **OT IN PYSCHIATRY(THEORY)& OT IN PYSCHIATRY(PRACTICAL)**

L-T-P: **L-** 80 HOURS ; **P** = 64 HOURS Credits: NA
(L=Lecture hours, T=Tutorial hours, P=Practical hours)

COURSE LEARNING OUTCOMES (CLOs)

After completing this Course, the students should be able to

CLO 1 Describe Disorders usually diagnosed in Infancy, Childhood, Adolescence

CLO 2 Explain Trends affecting Occupational Therapy , Spirituality, Dance Therapy, Music Therapy, Recreational Therapy, Biofeedback, Yoga

CLO 3 Set goals for intervention based on the Models and Frames of

reference CLO 4 Clinically demonstrate of the approaches used

CLO 5 Plan treatment implementation, termination and follow-up.

CLO 6 Prepare practical experience in conducting various types of groups in the clinical setting

CLO 7 Demonstrate an understanding of evaluation and therapy techniques used in occupational therapy for psychiatric conditions

Mapping of Course Learning Outcomes (CLOs) with Program Learning Outcomes (PLOs) and Program Specific Outcomes (PSOs)

	PLO 1	PLO 2	PLO	PLO	PLO	PLO 6	PLO 7	PLO 8	PLO 9	PLO 10	PLO 11	PLO	PSO	PSO	PSO	PSO

			3	**4**	**5**							**12**	**1**	**2**	**3**	**4**

CLO1	2	3	1	2	3	4	2	3	2	3	2	2	1	3	3	2
CLO2	3	3	3	3	3	2	3	2	2	2	3	2	3	2	1	1
CLO3	3	2	3	2	3	3	3	3	3	3	3	3	3	3	3	3
CLO4	2	2	2	2	2	2	2	2	2	3	3	3	3	3	2	2
CLO5	3	3	2	2	2	3	2	2	3	2	3	2	3	2	3	2
CLO6	3	3	3	2	2	3	2	3	2	3	2	3	2	2	3	2
CLO7	3	3	2	3	2	3	2	3	2	3	3	3	3	3	3	3

Grading: 3: High level Mapping
2: Medium level Mapping
1: Low level Mapping

Detailed Syllabus:

BOT 467 OT IN PSYCHIATRY (THEORY)& BOT 468 OT IN PSYCHIATRY (PRACTICAL)

BOT 467 OT IN PSYCHIATRY (THEORY)

Unit 1 Profession & Historical Perspectives. (2 hrs)

- Domains of Concerns. (3 hrs)
    - Performance Components.

- Occupational Performance.

- Life Cycle
- Environment: Cultural, Social, Physical Environment

- Tools of Practice (6 hrs)
  - Non-Human Environment.
  - Conscious Use of Self.
  - Teaching & Learning Processes
  - Purposeful Activities.
  - Activity Analysis & Synthesis
  - Groups (Therapeutic)

Unit 2 Evaluation & Intervention. (6 hrs)

- Evaluation.
- Evaluative Tools.
- Termination & Discharge Planning.
- Communication

- Change Process. (10 hrs)
  - Frames of References.
  - Analytical F.O.R.
  - Developmental F.O.R.
  - Acquisitional F.O.R.

Unit 3 Areas of Specialization.

- Mental Health
  - Disorders usually diagnosed in Infancy, Childhood, Adolescence. (8 hrs)
  - Delusion, Dementia, Amnesic & Other Cognitive Disorders. (8 hrs)
  - Substance Related Disorders (4 hrs)
  - Schizophrenia & other psychotic Disorders (4 hrs)

- Mood Disorders (4 hrs)
- Anxiety Disorders (4 hrs)
- Somatoform Disorders (2 hrs)

        - Dissociative Disorders (2 hrs)
        - Sexual & Gender Identity Disorders (2hrs)
        - Adjustment Disorders (2 hrs)
        - Personality Disorders (2hrs)
    - Physical Disabilities (1 hrs)
    - Developmental Disabilities and Child Abuse & Neglect (2 hrs)
    - Gerontology (2 hrs)
    - Pain Management (1 hrs)

- Practice Settings (2 hrs)

- Trends effecting Occupational Therapy (3 hrs)
    - Spirituality, Dance Therapy, Music Therapy, Recreational Therapy, Biofeedback, Yoga.

BOT 468 OT IN PSYCHIATRY (PRACTICAL)

Unit 1 :LAB HOURS (64 HOURS)

- Occupational Therapy evaluation and assessment of psychiatric conditions using standardized and non-standardized methods.
- Setting goals for intervention based on the Models and Frames of references
- Clinical demonstration of the approaches used
- Treatment planning, implementation, termination and follow-up.

Reference Books:

1. H.Hopkins & H.Smith ,Willard & Speckman Occupational Therapy 5th Edition Lippincott Williams and Wilkins publishers 976 pages
2. M. Wilson - Occupational Therapy in Short Term Psychiatry – 3rd Edn, Churchill Livingstone publishers
3. M. Wilson - Occupational Therapy in Long Term Psychiatry –3rd Edn. Churchill Livingstone 184 pages
4. G.S. Fidler and J.W. Fidler – Occupational Therapy a Communication Process. (1st Edn.) Mac Millan Publishers
5. K. Reed – Quick reference to Occupational Therapy 3rd Edition Pro Ed Publishers 994 pages

Teaching-Learning Strategies :

- Learning by doing,
- Learning through discussion among the peer group,
- Learning through Case Studies and Group Projects,
- Collecting questions in a Question Bowl taken around the class by the teacher or one of the students and discussion on those questions
- Preparation of question bank by students at various cognitive levels

Assessment methods and weightages:

- **Assessment methods**:

  Progress towards achievement of learning outcomes will be assessed using the following:

  - time-constrained examinations; closed-book test.
  - problem-based assignments: practical assignments, laboratory reports. Observation of practical skills.
  - individual project report (case study report); team project report; oral presentations, including seminar presentation; viva voce interviews; computerised adaptive testing; peer and self-assessment.

- **Weightage:**

  1.Total Weightage of the subject is of 100 marks. (25 Internal marks + 75 Annual examination marks)
  2.In order to pass a paper, a student has to secure at least 50% marks in that paper**.**

Name of the Academic Program BACHELOR OF OCCUPATIONAL THERAPY (BOT) 4TH

YEAR Course Code:BOT 469 **Title of the Course: Research Project**

L-T-P :P: 64 hours Credits NA
(L=Lecture hours, T=Tutorial hours, P=Practical hours)

COURSE LEARNING OUTCOMES (CLOs)

After completing this Course, the students should be able to:-

CLO-1 : Evaluate, assess and identify the basic understanding of human body on structural, functional basis .They will also be able to relate functional performance and use clinical reasoning skills in problem solving anddevelop need-based strategies to address problems

CLO-2 Develop and apply skills in various disciplines like pediatrics, musculoskeletal, neurology, psychiatry etc...

CLO-3 Apply training equipments and protocols, test performance for work fitness, indications andcontraindications for registering in exercise training.

Mapping of Course Learning Outcomes (CLOs) with Program Learning Outcomes (PLOs) and Program Specific Outcomes (PSOs)

	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5	PLO 6	PLO 7	PLO 8	PLO 9	PLO 10	PLO 11	PLO 12	PSO 1	PSO 2	PSO 3	PSO 4
CLO1	3	3	3	3	2	3	3	3	3	2	3	3	3	2	2	3

CLO2	3	3	3	3	3	3	2	3	2	3	2	3	3	3	3	3
CLO3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3

Grading: 3: High level Mapping
2: Medium level Mapping
1: Low level Mapping

Detailed Syllabus:

BOT469 Research project(practical)

- Research Project will be done under the supervision of the Faculty Members.
- Presentation and Viva of the same will be held

Teaching-Learning Strategies :

1. Learning through discussion among the peer group
2. Experiential Learning
3. Reflective Learning
4. Learning by doing group projects
5. Through Field Studies

Assessment methods and weightages:

- **Assessment methods**:

  Progress towards achievement of learning outcomes will be assessed using the following:

- time-constrained examinations; closed-book test.

- problem-based assignments: practical assignments, laboratory reports. Observation of practical skills.
- individual project report (case study report); team project report; oral presentations, including seminar presentation; viva voce interviews; computerised adaptive testing; peer and self-assessment.

- **Weightage:**

1.Total Weightage of the subject is of 100 marks. (25 Internal marks + 75 Annual examination marks) 2.In order to pass a paper, a student has to secure at least 50% marks in that paper**.**

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Name of the Academic Program BACHELOR OF OCCUPATIONAL THERAPY (BOT) 4TH YEAR
Course Code: BOT 470 **Title of the Course:** Clinical Training (Practical)

L-T-P :P: 464 hours Credits NA
(L=Lecture hours, T=Tutorial hours, P=Practical hours)

COURSE LEARNING OUTCOMES (CLOs)

After completing this Course, the students should be able to:-

CLO-1 : Evaluate, assess and identify the basic understanding of human body on structural, functional basis .They will also be able to relate functional performance and use clinical reasoning skills in problem solving anddevelop need-based strategies to address problems.

CLO-2 Develop and apply skills in various disciplines like pediatrics, musculoskeletal, neurology, psychiatry etc...
CLO-3 Apply training equipments and protocols, test performance for work fitness, indications andcontraindications for registering in exercise training.
CLO-4 Apply appropriate advanced therapeutic activities and modalities for effective occupational therapy intervention to enhance ability of individual.
CLO-5 Analyze various environmental parameters to identify the architectural barrier in the work environments.
CLO-6 Apply the assessment of anthropometric parameters of humanbody and know the layout of equipment design ofseating.

Mapping of Course Learning Outcomes (CLOs) with Program Learning Outcomes (PLOs) and Program Specific Outcomes (PSOs)

	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5	PLO 6	PLO 7	PLO 8	PLO 9	PLO 10	PLO 11	PLO 12	PSO 1	PSO 2	PSO 3	PSO 4
CLO1	3	2	3	3	2	3	3	3	3	2	2	3	3	2	2	3

CLO2	3	3	3	3	3	3	2	3	2	3	2	3	3	3	3	3
CLO3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
CLO4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
CLO5	3	3	2	3	3	2	2	3	2	3	1	2	3	3	3	2
CLO6	3	3	2	3	2	3	3	3	3	3	3	3	3	3	3	2

Grading: 3: High level Mapping
2: Medium level Mapping
1: Low level Mapping

Detailed Syllabus:

BOT470 Clinical training(practical)

Teaching-Learning Strategies :

- . Learning through discussion among the peer group
- Experiential Learning
- Reflective Learning
- Learning by doing group projects
- . Through Field Studies

Assessment methods and weightages:

- **Assessment methods**:

  Progress towards achievement of learning outcomes will be assessed using the following:

  - time-constrained examinations; closed-book test.
  - problem-based assignments: practical assignments, laboratory reports. Observation of practical skills.
  - individual project report (case study report); team project report; oral presentations, including seminar presentation; viva voce interviews; computerised adaptive testing; peer and self-assessment.

- **Weightage:**

  1.Total Weightage of the subject is of 100 marks. (25 Internal marks + 75 Annual examination marks)

  2.In order to pass a paper, a student has to secure at least 50% marks in that paper**.**