

COURSE NAME;BACHELOR OF OCCUPATIONAL THERAPY

YEAR I

<b>Course Code</b>	<b>Course Title</b>
ENG14101	Communication For Professionals
ANT14102	Human Anatomy& Physiology
BCH14101	Biochemistry
OCT14101	Fundamentals of Occupational Therapy-I
OCT14102	Fundamentals of Occupational Therapy-II
ANT14102P	Human Anatomy & Physiology
OCT14101P	Fundamentals of Occupational Therapy-I
OCT14102P	Fundamentals of Occupational Therapy-II
TRN14101	Hospital Training-I

YEAR II

<b>Course Code</b>	<b>Course Title</b>
PHM14201	Pharmacology
MBL14209	Pathology & Microbiology
PYC14201	Psychology
BOT14209	Ergotherapeutics-I
BOT14210	Ergotherapeutics-II
MBL14209P	Pathology & Microbiology
BOT14209P	Ergotherapeutics-I
BOT14210P	Ergotherapeutics-II
TRN14201	Hospital Training-II

**YEAR III**

<b>Course Code</b>	<b>Course Title</b>
MED14301	Medicine
PYC14301	Psychiatry
PSI14301	Work Physiology & Ergonomics
OCT14301	OT in Medical Conditions
OCT14302	OT in Surgical Conditions
MED14301P	Medicine
OCT14301P	OT in Medical Conditions
OCT14302P	OT in Surgical Conditions
TRN14301	Hospital Training-III

**YEAR IV**

<b>Course Code</b>	<b>Course Title</b>
OCT14401	Advanced Occupational Therapy
OCT14402	Occupational Therapy in Orthopedic Conditions
OCT14403	Occupational Therapy in Neurological and Developmental Conditions
OCT14404	Occupational Therapy in Psychiatric Conditions
OCT14405	Community Based Occupational Therapy and Rehabilitation
OCT14402P	Occupational Therapy in Orthopedic Conditions
OCT14403P	Occupational Therapy in Neurological and Developmental Conditions
OCT14404P	Occupational Therapy in Psychiatric Conditions
OCT14401	Hospital Training-IV

**COMMUNICATION FOR PROFESSIONALS- ENG14101**

UNIT	CONTENTS
1	<p><b>Parts of Speech:</b> Definition of all the eight parts along with examples and their use in language.</p> <p><b>Definite and Indefinite articles:</b> a, an, and, the, Definition and its uses along with examples.</p> <p><b>Types of Pronouns:</b> Personal, Reflexive, Emphatic, Demonstrative, Relative, Indefinite, Interrogative and Distributive pronouns.</p> <p><b>Noun:</b> Defining noun along with types and categories, Gender, Number case</p> <p><b>Adjective:</b> Adjective, Comparison, Adjective used as nouns, Positions of the Adjective and Correct use of Adjectives.</p> <p><b>Verb:</b> Definition, Its forms, Verbs of incomplete predication, Phrases (defining it along with examples). Adjective, Adverb and Noun Phrase.</p> <p><b>Clauses:</b> Defining it along with examples: Adverb, Adjective and Noun Clauses.</p> <p><b>Sentence and its Types:</b> Simple, Compound and Complex, Subject and Predicate (parts of a sentence), Transformation of Sentences. Active and Passive voice, Mood and Narration (Direct and Indirect speeches).</p>
2	<p><b>Words and Phrases:</b> Word formation (prefix, suffix), Idioms, Synonyms and Antonyms, Phonetics, Speech sound, The phoneme, The syllable and IPA transcription.</p>
3	<p><b>Business Correspondence I:</b> Paragraph writing, Introductory remarks, Principles, Writing of single paragraphs and precise writing Letter writing Quotations and Orders- Orders and tenders, Inviting and sending quotations, Placing orders and Inviting tenders.</p>
4	<p><b>Business Correspondence II:</b> Notices, Agenda and Minutes, Application letter, Importance and function, Drafting the application, Elements structure, Preparing CV's.</p>
5	<p><b>Applied Grammar:</b> Correct usage of Grammar, Structure of sentences, Structure of paragraphs, Enlargements of vocabulary.</p>
6	<p><b>Business Writing:</b></p>

	Written composition, Precise writing and summarizing, Writing of Bibliography, and Enlargement of vocabulary.
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## **HUMAN ANATOMY & PHYSIOLOGY- ANT14102**

UNIT	CONTENTS
1	<b>The Human Body:</b> Definitions Sub-divisions of Anatomy Terms of Location and Position Fundamental Planes Vertebrate Structure of Man Organization of the Body Cells and Tissues
2	<b>The Skeletal System:</b> Types, Structure and Growth Division of the Skeleton- Appendicular skeleton Axial skeleton Names of Bones and their parts Joints Classification Types of movements with examples
3	<b>Anatomy of Circulatory System:</b> Heart - Size, position coverings and chambers, Blood Supply Nerve supply Blood Vessels General Plan of Circulation Pulmonary Circulation- Names of Arteries and Veins Position of Arteries and Veins Lymphatic System General Plan
4	<b>Anatomy of the Respiratory System:</b> Organs of Respiratory- Larynx Trachea Bronchial Tree Respiratory Portion- Pleural Cavity and Lungs

	Brief knowledge of parts and position
5	<p><b>Anatomy of the Digestive System:</b>  Components of Digestive System  Alimentary Tube  Anatomy of Organs of Digestive Tube-  Mouth  Tongue  Tooth  Salivary Glands  Liver  Biliary apparatus  Pancreas  Names and position and brief functions.</p>
6	<p><b>Anatomy of the Nervous System :</b>  Central Nervous System  The brain  Hind brain  Midbrain  Forebrain,  Brief structure &amp; location of Peripheral Nervous System  Spinal cord anatomy &amp; functions  Reflex – arc  Ménages,  Injuries to spinal cord and brain.</p>
7	<p><b>Anatomy of the Endocrine System:</b>  Name of all Endocrine Glands &amp; their position  Hormones and their functions  Pituitary  Thyroid  Parathyroid  Adrenal glands  Gonads &amp; Islets of Pancreas.</p>
8	<p><b>Anatomy of Excretory System and Reproductive System:</b>  Kidneys – Location &amp; Gross Structure  Excretory Ducts  Urethras  Urinary Bladder  Urethra  Male Reproductive System  Testis  Duct System  Female Reproductive System  Ovaries Duct System  Accessory Organs.</p>
9	<p><b>Physiology:</b>  Blood definitions  Composition, Properties and Function of Blood,  Haemogram (RBC, WBC, platelet count, HB concentrations) Function of Plasma Proteins Haemopoiesis,</p>

	<p>Blood Group - ABO and RH grouping,  Coagulation &amp; Anticoagulants  Causes, effects &amp; treatment of Anemia,  Body fluid compartments  Composition,  Immunity  Lymphoid Tissue,  Clotting factors,  Mechanism of Blood Clotting,  Disorders of White Blood Cells,  Disorders of Platelets,  Disorders of Clotting.</p>
10	<p><b>Cardio Vascular System:</b>  Function of Cardiovascular System.  Structure of Cardiovascular System.  Cardiac cycle  Functional tissue of Heart &amp; their function  Cardiac Output  E.C.G  Blood Pressure  Heart Rate</p>
11	<p><b>Respiratory System:</b>  Function of Respiratory System  Functional (physiological ) Anatomy of Respiratory System  Mechanism of Respiration—Lung volumes &amp; capacities  Transport of Respiratory Gases</p>
12	<p><b>Digestive System:</b>  Function of Digestive System,  Functional Anatomy of Digestive System,  Composition and Functions of all Digestive Juices  Movements of Digestive System (intestine)  Digestion &amp; Absorption of Carbohydrate  Proteins &amp; Fats</p>
13	<p><b>Nervous System:</b>  Functions of Nervous System,  Neuron - Conduction of impulses and factors effecting it  Synapse - Transmission, Reception, Reflexes,  Ascending and Descending Tracts  Functions of various parts of the Brain,  Cerebro Spinal Fluid (CSF)—Composition, Functions &amp; Circulation,  Lumbar Puncture  Autonomic Nervous System - and its types, Functions of (ANS).</p>
14	<p><b>Special Senses:</b>  Vision –  Structure of Eye  Function of different parts  Refractive errors and correction  Visual pathways,  Color vision &amp; tests for color blindness,  Hearing –  Structure and Function of Ear</p>

	<p>Mechanism of Hearing Test for Hearing (Deafness).</p>
	<p><b>Muscle Nerve Physiology</b> Type of Muscle Structure of Skeletal Muscle Sarcomere Neuromuscular junction &amp; transmission Excitation &amp; Contraction Coupling (Mechanism of Contraction).</p>
15	<p><b>Skin :</b> Structure and function of Skin Body Temperature Fever Regulation of Temperature.</p>
16	<p><b>Excretory system:</b> Excretory Organs Kidneys - Function     Nephron     Juxtaglomerular Apparatus,     Renal Circulation Mechanism of Urine formation Mechanism of Micturition Cystometrogram Diuretics Artificial Kidney.</p>
17	<p><b>Reproduction System:</b> Structure and function of Reproductive System Male Reproductive System- Spermatogenesis Testosterone. Female Reproductive System – Ovulation Menstrual Cycle Oogenesis Tests for Ovulation, Estrogen &amp; Progesterone, Pregnancy Test Parturition Contraceptive Lactation Composition of Milk Advantages of Breast Feeding.</p>

## BIOCHEMISTRY- BCH14101

UNIT	CONTENTS
1	<b>Carbohydrates – Chemistry:</b> Definition and classification with Examples Functions Digestion and Absorption Glycogens, Glycolysis TCA cycle Hormonal regulation of Blood Glucose Diabetes Mellitus Glycosuria Changes in Carbohydrate Protein and Lipid Metabolism.
2	<b>Proteins:</b> Definition Importance and Functional classification Digestion and absorption Decarboxylation Deamination Transamination Transmethylation Urea cycle Clinical significance of Serum Urea Function of Glycine Phenylalanine Tryptophan Methionine Tyrosine.
3	<b>Enzymes:</b> Definition and Modern classification Factors affecting Enzymes action Diagnostic and Therapeutic uses of Enzymes Iso-enzymes Competitive and non competitive Inhibition.
4	<b>Vitamins:</b> Definition Classification Fat and water soluble Vitamins Functions Deficiency, Manifestations Sources & RDA
5	<b>Minerals:</b> Ca, P, Fe, I, Zinc, Selenium, Fluorine, Magnesium, Function sources, Deficiency Manifestations. <b>Hormones:</b> Definition with mechanism of action Classification.
6	<b>Nutrition:</b> Composition of Food Balanced Diet Kwashiorkor, Marasmus Nitrogen Balance Major Dietary Constituent and their Basal Metabolic Rate Factors affecting BMR and their importance.



	<b>Clinical Biochemistry-</b> Liver Function Test Kidney Function Test Lipid Profile in Serum.
7	<b>Lipid:</b> Definition Classification with examples Biomedical importance Phospholipids and Lipoproteins Functions Digestion and absorption of Lipid Beta-oxidation of Fatty Acid with Energetic Ketone Bodies and their Metabolism Cholesterol Importance of cholesterol Obesity.
8	<b>Muscle Contraction:</b> Mechanism and Biochemical events <b>Nucleic Acid-</b> Function of DNA RNA  Genetic Code specialized products of Amino Acids Phenylalminetryosine Trptophan Glycine Methionine <del>Transamination Deamination and Urea Cycle (Protein)</del>
9	Clinical significance of some importance Biochemical constituents in Serum in various diseases,

**LEARNING SOURCE:** Self Learning Materials

**ADDITIONAL READINGS:**

- A. Medical Biochemistry: U. Satyanarayan
- B. Biochemistry: Dr. Vasudev

**FUNDAMENTALS OF OCCUPATIONAL THERAPY-I- OCT14101**

UNIT	CONTENTS
1	<b>Occupational Therapy:</b> Definition and Scope of Occupational Therapy History & Development of Occupational Therapy Rehabilitation Philosophy Rehab Team Need of Rehab. Principles of Physical Medicine.
2	<b>Occupation:</b> Theory of Occupation Forms of Occupation Occupation as Evolutionary Trait Biological Dimensions Social Dimensions Psychological Dimensions of Occupation Application of Theory to Occupational Therapy.

3	<p><b>Occupational Performance Model:</b> Occupational Performance Model with respect to Physical Dysfunction  Treatment continuum based on Occupational Performance Model  Relationship of the model to treatment approaches viz biomechanical, motor control and rehabilitation.</p>
4	<p><b>Therapeutic Exercises:</b>  Principles of Therapeutic Exercises  Generalized and Specific Principles  Types of Movements  Muscle Contraction used in Exercise  Exercise Classification and Application to Activity  Objective to Develop -</p> <ul style="list-style-type: none"> <li>i) Power</li> <li>ii) Endurance</li> <li>iii) Coordination</li> <li>iv) ROM, Progressive resistive exercise (PRE), Regressive resistive exercise (RRE), Brief Repetitive Isometric Exercise (BRIME)</li> </ul>
5	<p><b>Therapeutic Modalities:-</b>  Purposeful activity and characteristics  <b>Activity Analysis-</b>  Principles of Activity Analysis,  Biomechanical and Sensory Motor  Adapting and Grading Activity  Selection of Activity  Principles and methods of Assessment  Joint range of Motion  Muscle Strength  Definition &amp; Classification of Activity Analysis  Variation in Testing methods of-</p> <ul style="list-style-type: none"> <li>Muscle tone</li> <li>Sensation</li> <li>Perception</li> </ul>

**FUNDAMENTALS OF OCCUPATIONAL THERAPY-II- OCT14102**

_ UNIT	CONTENTS
1	<p><b>Human Development:</b>                      Basic concepts on Human Development                      Importance of knowledge base Human Development                      Definition of Human Development                      Aspects of human development – physical,                          Motor                          Sensory                          Cognitive                          Emotional cultural                          Social                      Factors influencing human growth and development –                          Biological                          Environment inherited.</p>
2	<p><b>Maturation:</b>                      Principles of Maturation- General principles,                      Anatomic Directional Principles                      Cephalocaudal patterns of development                      Proximal distal patterns of development                      Medial lateral patterns of development                      Mass to specific patterns of development                      Gross Motor to Fine Motor patterns of development.</p>
3	<p><b>Activities of Daily Living:</b>                      Definition , Classification &amp; Evaluation of ADL                      Various scales used in ADL (Barthel, Katz, Kenny’s, Klein-Bell, AMP’s Indices)                      Principles &amp; Specific Techniques in ADL training for-                          Weakness,                          Low endurance,                          Limited ROM,                          In coordination Loss of use of one side of body,                          Limited vision,                          Decreased sensation,                          Achieving access to home, community and work place.</p> <p><b>Adaptation -</b>                      Adaptation Process                      Introduction to Adapted Devices                      Cultural and Socio-economical deviations in ADL.</p>
4	<p><b>Occupational Therapy as diagnostic &amp; prognostic procedure:</b>                      Definition of Evaluation                      Types of Evaluation                      Steps involved in Evaluation  <b>Preparing for return to work-</b>                      Prevocational Capacity Evaluation                      Work Capacity Evaluation                      Physical Capacity Evaluation                      Functional Capacity Evaluation</p>
5	<p><b>Crafts:</b>                      Knowledge of Tools                      Equipment                      Materials &amp; their Therapeutic Values &amp; Uses.  <b>Hand Function and Evaluation Methods-</b>                      Functional Anatomy of Hand</p>

	Prehension and Grasp patterns Grip and Pinch Strength Functional Evaluation of Hand Oedema assessment. <b>Introduction to Hand Splints –</b> Definition of Hand Splints Classification & Principles of Hand Splints Material used in designing & fabrication of Hand Splints.
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## HOSPITAL TRAINING-I-TRN14101

### YEAR II

### PHARMACOLOGY- PHM14201

UNIT	CONTENTS
1	<b>General Pharmacology-</b> Drug Pharmaco-kinetics Pharmacology Adverse Reaction Factors modifying Drug Effect.
2	<b>Drug activity of CNS:</b> Introduction to Drug Activity of CNS, Alcohols+ Sedatives and hypnotics Anti-convulsion Analgesics & Antipyretics Specially Gout. & R.A. Psycho Therapeutics General anesthetic Local anesthetic
3	<b>Drugs acting on peripheral nervous system-</b> Adrenergic , Cholinergic
4	Drug therapy in Parkinsonism
5	Skeletal muscle relaxants
6	<b>Drugs acting on CVs:</b> Hyper Tension Beta blockers Calcium Channel Blocker ACE Inhibitors,

	<p>Prazosin  Diuretics  Congestive Cardiac Failure CCF  Angina  Antiarrhythmia + Shock  Drug satisfying Homeostasis</p>
7	<p><b>Drugs acting on Respiratory system:</b>  For upper respiratory tract  Infections -  Sinusitis – Cough,  Laryngitis,  Pharyngitis for Bronchial asthma  Chronic Obstructive Pulmonary Disease (COPD)  Effects of prolonged Drug administration</p>
8	<p>Insulin &amp; Oral Anti-diabetic Drugs</p>
9	<p><b>Chemo-therapy:</b>  General Principles  Anti Tuberculosis  Anti-leprosy  Other Chemo Therapeutic drugs,  Sulfa drugs in Urinary Tract Infection,  Tetra/chlora</p>
10	<p><b>Endocrine:</b>  Introduction to Endocrine  Thyroid &amp; Antithyroid  Estrogen + Progesterone  Steroids anabolic steroids</p>
11	<p><b>Drugs for:</b>  G.I. Tract  Peptic ulcer  Antiemetic Diarrhoea &amp; Constipation  Heamatinics,  Vitamin B  Iron  Dermatological  Scabies  Psoriasis  Local antifungal</p>
12	<p>Vaccines &amp; Sera</p>
13	<p>Vitamin- D. Calcium, Phosphorus, Magnesium</p>

## **PATHOLOGY & MICROBIOLOGY- MBL14209**

UNIT	CONTENTS
1	<p><b>General Pathology:</b>            Cell injury-causes            mechanism &amp; toxic injuries with special reference to Physical, Chemical, &amp; ionizing radiation,            Reversible injury (degeneration)-            Types of Reversible Injury                Morphology,                Swelling                Hyaline                fatty changes            Intra-cellular accumulation-                Hyaline Mucin            Irreversible cell injury-            Types of necrosis-            Apoptosis – calcification            Dystrophic &amp; Metastasis,            Extra-cellular accumulation-            Amyloidosis            Calcification-Pathogenesis- Morphology</p>
2	<p><b>Inflammation &amp; Repair:</b>            Acute inflammation – Features, Causes, Vascular &amp; Cellular events,            Morphologic variations            Inflammatory cells &amp; mediators            Chronic inflammation:            Causes &amp; Types of Chronic Inflammation            Non-specific &amp; Granulomatous – with examples,            Wound healing by primary &amp; secondary union factors promoting &amp; delaying healing process            Healing at various sites - including-bones            Nerve &amp; Muscle regeneration &amp; repair.</p>
3	<p><b>Immuno-Pathology</b>            Basic concepts,            Immune system – organization            Cells-antibiotics            Regulation of immune responses.            Hyper-sensitivity            Secondary immune-deficiency including HIV            Organ transplantation</p>
4	<p><b>Circulatory Disturbances:</b>            Edema -                Pathogenesis                Types                Translates/exudates.            Chronic venous congestion -                Lung                Liver                Spleen            Thrombosis -                Formation                Fate                Effects            Embolism -</p>

	<ul style="list-style-type: none"> <li>Types</li> <li>Clinical effects</li> <li>Infarction - <ul style="list-style-type: none"> <li>Types</li> <li>Common sites</li> </ul> </li> <li>Gangrenes - <ul style="list-style-type: none"> <li>Types</li> <li>An Etiopathogenesis,</li> </ul> </li> <li>Shock - <ul style="list-style-type: none"> <li>Pathogenesis,</li> <li>Types</li> <li>Morphologic change</li> </ul> </li> </ul>
5	Deficiency disorders – Vitamins A, B, C, D
6	<p><b>Growth Disturbance:</b></p> <ul style="list-style-type: none"> <li>Atrophy-malformation</li> <li>Agensis</li> <li>Dysplasia</li> <li>Neoplasia classification</li> <li>Histogenesis</li> <li>Biologic behaviors</li> <li>Difference between Benign &amp; Malignant Tumour</li> <li>Malignant Neoplasms-grades-stages-local and distal spread.</li> <li>Carcinogenesis - <ul style="list-style-type: none"> <li>Environmental Carcinogens <ul style="list-style-type: none"> <li>Chemical</li> <li>Occupational</li> <li>Heredity</li> <li>Viral</li> </ul> </li> <li>Precancerous lesions and ca in situ</li> </ul> </li> <li>Tumor &amp; host interactions - <ul style="list-style-type: none"> <li>Systemic effects</li> <li>Metastatic or direct spread of tumors affecting bones</li> <li>Spinal Cord</li> <li>Leading to Paraplegia, etc.</li> </ul> </li> </ul>
7	Medical Genetics
8	<p><b>Specific Pathology:</b></p> <ul style="list-style-type: none"> <li>CVS Atherosclerosis</li> <li>Ischaemic heart diseases</li> <li>Myocardial infarction <ul style="list-style-type: none"> <li>Pathogenesis/Pathology</li> <li>Hypertension</li> <li>C.C.F.</li> <li>Rh H.D. Peripheral vascular diseases,</li> </ul> </li> <li>Respiratory – <ul style="list-style-type: none"> <li>COPD</li> <li>Pneumonia (lobar, broncho, viral),</li> <li>T.B. Primary,</li> </ul> </li> <li>Secondary – <ul style="list-style-type: none"> <li>Morphologic Types,</li> <li>Pleuritis,</li> <li>Complications,</li> </ul> </li> <li>Lung collapse – atelectasis</li> <li>Neuro Pathology - <ul style="list-style-type: none"> <li>Reaction of nervous tissue to injury <ul style="list-style-type: none"> <li>Infection &amp; Ischaemia,</li> <li>Pyogenic meningitis,</li> </ul> </li> </ul> </li> </ul>

	<p>TBM, Viral, Cerebro-vascular diseases Atherosclerosis Thrombosis Embolism Aneurysm Hyproxia Infarction and hemorrhage Effects of Hypotension on CNS Coma Polio myelitis Leprosy Demyelinating diseases Parkinsonism Cerebral palsy Metachromatic leucodystrophy Dementia Hemiplegia/ Paraplegia Pathogenesis and Pathology of Wilson's disease SOL – Peripheral Nerve Injury</p>
9	<p><b>Muscle Diseases:</b> Muscular dystrophy Hypertrophy Pseudo-Regeneration Myotonia Neuro- Muscular junction Myasthenia gravis Myasthenic syndrome</p>
10	<p><b>Bone &amp; Joints:</b> Fracture healing Osteomyelitis Rickets &amp; Ostemalacia Bone Tumors Osteoporosis Spondylosis P.I.D. Scoliosis Haemarthrosis Gout T.B. Arthritis Degenerative Inflammatory – Rheumatoid Arthritis Ankylosing Spondylitis Tenosynovitis</p>
11	<p><b>Urinary:</b> Commonly encountered in Paralytic bladder Common Urinary Tract Infection Urinary Calculi</p>
12	<p><b>G.I. system:</b> Gastric/duodenal ulcer Enteric fever TB Enteritis Gastritis (related to consumption of NSAID)</p>
13	<p><b>Endocrine :</b></p>



	Hyperthyroidism Diabetes
14	<b>Hepatic Diseases</b> Cirrhosis – emphasis to systemic effects of portal hypertension.
15	<b>Skin-</b> Melanin pigment disorders Vitiligo & Tinea Versicolor Psoriasis – Bacterial/fungal infections- Cutaneous TB Scleroderma Systemic lupus erythematosus (SLE) ) Leprosy Alopecia.
16	<b>Clinical Pathology:</b> Anemia – (Deficiency) – TC/DC/ Eosinophilia E.S.R. & C.P.K test  Muscle/skin/nerve biopsy Microscopic appearance of muscle necrosis-
17	Fatty infiltration, Lab investigation in liver & renal failure <b>General Microbiology:</b> Introduction & scope of General Microbiology Classification of Micro-organisms
18	Morphology of Bacteria Sterilization & disinfection [basic concepts, hospital acquired infection, universal safety precautions, waste disposal] <b>Immunology:</b> Antigen antibody – reaction & application for diagnosis Immune response – normal / abnormal
19	Innate immunity & acquired immunity [vaccination] Hyper – sensitivity & auto-immunity Laboratory Diagnosis of Infection <b>Bacteriology:</b> Infection caused by gram +ve cocci; Gas gangrene Clostridium Diphtheria Infection caused by Gram–ve cocci, Cholera – Septicemia  Shock Typhoid diarrhoea Mycobacterial infection <del>Tuberculosis-Leprosy-Atypical Mycobacterium,</del>
	Syphilis – morphology & pathogenesis [VDRL, Viruses - Introduction & general properties] HIV Hepatitis <b>Mycology:</b> Mycetoma Aspergilosis Candidiasis Parasites affecting Central Nervous System <sup>20</sup> Malaria, Filaria, Toxoplasma, Cysticercosis & echinococcus, Applied Microbiology relevant to diseases involving Bones, Joints – Nerves – Muscles-

	Skinbrain - cardiopulmonary system & burns.
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## **PSYCHOLOGY- PYC14201**

UNIT	CONTENTS
1	<p><b>General Psychology:</b>  Introduction to Psychology  Fields of Psychology  Schools of thoughts  Attention – definition and its type  Perception –      Form perception      Depth perception      Constancy      Movement      Plasticity and individual differences in perception  Stress -      Types      Stress cycles and coping with stress  Feeling &amp; emotion-      Physiology and theories of emotion,  Motivation -      Theories of motivation      Different types of motives and sources of conflicts and adjustment.  Personality-      Theories of personality      Types of assessments of personality,      Communication and language  Intelligence -      Nature and Theories of Intelligence      Individual differences and enumerate types of assessments of Intelligence  Memory &amp; retention -      Theories and Memory      Short term and long term Memory      Forgetting      Amnesia      Methods of improving Memory  Basic principles of Human Learning -      Definition of Learning      Basic Principles of Human Learning.  Thinking -</p>

	Thinking process Concepts Problem solving Decision making and creative thinking
2	<b>Developmental Psychology:</b> Introduction to Developmental Theories Individual differences in Behavior Influence of Heredity and Environment Infancy The early childhood The middle childhood Puberty – Physiological and Psychological changes The adolescent state Early and middle adulthood Old age
3	<b>Abnormal Psychology:</b> Meaning of Abnormal Behavior  Classification of Abnormal Behavior Causal factors in Abnormal Behavior
4	<b>Experimental Psychology:</b> Mechanics of Brain and Neuropsychological Experiments on Sensory System Learning and Retention Memory Perception  Emotion, Motor Behavior and Reaction Time Motivation and Rewards Attention.

### **ERGOTHERAPEUTICS-I- BOT14209**

UNIT	CONTENTS
1	<b>General Concepts of Biomechanics:</b> Essential terms and concepts in biomechanics Classification of mechanics static Dynamic Kinematics Kinetic.
2	<b>Kinetics - Force :</b> Definition Newton's laws of motion with examples and application in O.T. Classification of force system –

	<p>Linear Parallel Concurrent General</p> <p>Composition and resolution of forces with examples.</p> <p>Moment Torque and couple</p> <p>Types of forces – Internal External</p> <p>Gravity- Centre of gravity and its application in human body Planes of human body.</p> <p>Levers – Classification Physiological significance of Trade-off of mechanical advantage</p> <p>Static and dynamic equilibrium with examples</p> <p>Friction and its practical application in the human body application in occupational therapy</p>
3	<p><b>Kinematics:</b> Types of motion Linear/translator, Rotator/angular Curvilinear General plane motion</p> <p>Application of kinematics in human body – open and close kinematics chain motion.</p>
4	<p><b>Biomechanics of upper extremity Joints:</b> Shoulder Elbow Radio-wrist Hand with special emphasis on particular surfaces Joint capsule Type of joint Muscles and ligaments surrounding the joint, their action and functions forces applied, movements occurring, relationship of joints to other joints.</p>
5	<p><b>Biomechanics of Lower Extremity Joints:</b> With special emphasis on Articular surfaces, Joint capsule, Type of joint Muscles and ligaments surrounding the joint, their action and functions, forces applied, movements occurring, relationship of joints to other joints. In addition to following. Hip – Varus and valgus of femoral neck, Forces acting during single and double leg stance, factors affecting, effect of use of cane on hip joint forces. Knee and patella-femoral – Stability and mobility with respect to locking and unlocking of joint. Ankle and Sub-talar joints- Stability achieved Arches of foot Weight bearing on foot.</p>
6	<p><b>Gait:</b> Normal human Gait cycle (walking) Its parameters Myokinetics and kinematics</p> <p>Stair gait, Running Common gait deviations Types of crutch and cane</p>

	Crutch and cane gaits Preparatory exercises for crutch cane walking.
7	<b>Posture:</b> Anatomical aspects of Posture Factors affecting Posture Normal and Abnormal Curvatures of Spine Exercises for Spine Vicarious movements - types with example  In various nerve injuries Range of Motion Testing Principles in Clinical conditions - indications and contraindications Visual observations Muscles strength- individual muscle testing Principles in clinical conditions.

### **ERGOTHERAPEUTICS-II- BOT14210**

UNIT	CONTENTS
1	<b>Theory of Spatiotemporal Adaptation:</b> Posture and Movement Sensory-motor-sensory Integration Reflex and reaction maturation Stability and mobility development.
2	<b>Theoretical Foundation of Human Development:</b> Learning Theories – Behavior Theory Social learning theory Maturation theory of Arnod, Gesell Psychoanalytic theory of Sigmund Freud, Erik Erikson Cognitive Theory of Pean Piaget Humanistic self theory, Ethologic
3	<b>Overview of Sensory - Motor Approaches:</b> Road's approaches Bobath approach Brunnstrom's approaches Sensory integrative approach Motor relearning program
4	<b>Hand Function Tests:</b> Jebson Taylor Crawford small part dexterity test Purdue pet board Complete Minnesota dexterity test.
5	<b>Functional bracing:</b> Definition

	Concept of Functional Bracing Objectives and scientific basis of functional bracing Importance in healing of fractures Advantages over Conventional Bracing Material used Indication and contraindication of functional Bracing.
6	<b>Play in Child Development:</b> Play behavior Functions of Play- Social Physical Sensory Emotional Perceptual Cognitive Content and structure of play Theories of play Role of play in Occupational therapy treatment process.

## HOSPITAL TRAINING-II-TRN14201

### YEAR III

### MEDICINE- MED14301

UNIT	CONTENTS
1	<b>Diseases of Cardio-vascular system:</b> Ischeamic Heart Diseases Hypertensive Heart Disease Rheumatic Heart Disease Thyrotoxic Heart Disease Arrhythmias vascular Disease Thrombosis Embolism and ECG reading.
2	<b>Disease of Endocrine system:</b> Emphasis on Diabetes Mellitus – Definition Diagnosis

	<p>Classification, complications and management,  Outline of Hypopituitarism,  Goitre  Hyperthyroidism and Hypothyroidism,  Hypoadrenalism and Hyperadrenalism  Calcium metabolism.</p>
3	<p><b>Diseases of Respiratory system:</b>  Diseases of Lungs  Bronchi  Bronchial Asthama  Bronchiectasis  Pulmonary Embolism  Pulmonary Tuberculosis  Lung abscess  Emphysema  Lobar  Pneumonia  Bronchopneumonia  Cor Pulmonale  Fibroid lung.</p>
4	<p><b>Rheumatic Disease:</b>  Rheumatic Fever  Rheumatoid Arthritis  Still's disease  SLE Polymyositis  Seronegative arthritis  Gout Etiopathogenesis,  Clinical features, complications, diagnosis and brief outline of the Rheumatic disease management.</p>
5	<p><b>Diseases of Digestive System:</b>  Gastric and Duodenal  ulcers Haematemesis  Hepatitis  Malabsorption syndrome  Deficiency diseases:  Rickets  Protein deficiency  Beri beri  Subacute combined degeneration  Obesity: Aetiology and management</p>
6	<p><b>Pediatrics:</b>  Normal growth and development  Immunization  Breast Feeding  Birth Injuries  C.N.S. involvement  Nutritional deficiencies and associated systemic conditions Genetic anomalies  Intensive neonatological and Pediatric Care.</p>

7	<p><b>Geriatrics:</b>  Age related changes in human body &amp; response  Health care for elderly patients  Wellness clinic  Dermatology:  Common skin infections  Psoriasis  Leprosy  Venereal disease and infectious diseases  HIV infections  Nephrology:  Acute and Chronic Renal Failure  Glomerular Nephritis  Urinary Tract Infection</p>
8	<p><b>Hematology:</b>  Anaemia Haemophilia  Thalassaemia  Leukaemia Hodgkin's  disease Intensive  medical care</p> <p>Common Infectious  Diseases-Malaria  Rabies  Leptospirosis  Dengue Clinical  Evaluation  Interpretation  Presentation and recording of one case each  in-Respiratory  Craniological  Rheumatological condition  Evaluation of neonatal/abnormal reflexes and examination of nervous system in  pediatric cases.</p>



## PSYCHIATRY- PYC14301

UNIT	CONTENTS
1	<p><b>Psychiatry:</b>            Psychiatric history            Mental status examination            Classification of mental disorders</p>
2	<p><b>Management of Psychiatric Conditions:</b>            Schizophrenic disorders,            Psychotic disorder            Delusional disorder            Schizoaffective disorder            Post partum Psychosis            Mood disorders other affective disorders            Organic mental disorders            Psychiatric aspects of aids            Anxiety disorders            Phobia            Obsessive compulsive            Dissociative            Conversion disorders hypochondrias            Post traumatic stress disorders            Personality disorders-            Substance related disorders            Adjustment and impulse control disorders            Psycho-sexual disorders            Psychological factors affecting medical condition (psychosomatic disorders)            Psychiatric emergencies – suicide            Stress management            Disorders of infancy            Childhood and adolescence            Disruptive behavior disorders            Conduct disorder            Attention deficit and hyperactivity disorder            Eating disorders            Tic disorders            elimination disorders            Affective disorders            Child abuse, enuresis.</p>
3	<p><b>Treatment :</b>            Electroconvulsive Therapy Treatment            Chemotherapy            Group therapy            Psychotherapy            Cognitive behavior therapy</p>

## WORK PHYSIOLOGY & ERGONOMICS- PSI14301

UNIT	CONTENTS
1	<b>Work Physiology:</b> Physical performance Aerobic and anaerobic processes Physiology of Aerobic and anaerobic exercises.
2	<b>Evaluation of Physical Performance:</b> Test of maximum Aerobic power, Master step test, Tread mill, Bicycle, ergometry.
3	<b>Principles and Methods of Physical Training.</b>
4	<b>Nutrition and Physiology:</b> Energy expenditure at work, rest, leisure and fatigue
5	<b>Nutrition and Physiology Performance:</b> Temperature regulation, Definition & areas of ergonomics.
6	<b>Definition &amp; Areas of Ergonomics:</b> Anthropometry – definition Facets viz. static and dynamic Static anthropometry – differences in respect to gender, ethnicity, age, occupation, person with disability, measurements, concept of 5 <sup>th</sup> %, 50%, and 95 <sup>th</sup> % Limitation and uses data Principles in its application.
7	<b>Environmental Physiology:</b> Types of Environment, Effects of Environmental Factors such as Temperature Humidity Noise vibration Visual Environment Pollution on human body.
8	<b>Skills Psychology :</b> Skill learning Stages involved Characteristic of well learnt task Man-machine oriented topics Functioning of man-machine system Information Procession Theory Design of work space and work Equipment.
9	<b>Layout of Equipment:</b> Design of seating Characteristics of display and control Their compatibility Safety factors – Accidents and their prevention, Cognitive workload and organization of mental space.
	<b>Time and Motion Study :</b> Definition Assumptions of fundamental philosophy of time and motion study, Cycle of managerial control and its application Steps involved in scientific methods solving problem Outline of methods of man product analysis Work-site job analysis and design considerations Scope of ergonomics in modern industrial society Application of ergonomics in Occupational Therapy.

## OT IN MEDICAL CONDITIONS- OCT14301

UNIT	CONTENTS
1	<p><b>Rheumatoid Arthritis:</b> R.A. Role of O.T. in treatment of R.A. and Collagen disorders with assessment. Pathomechanics of hand deformities their prevention and splintage Rehabilitation in acute, sub acute and chronic state of R.A. Joint protection technique their implication in R.A. patients with work simplification and energy conservation techniques.</p>
2	<p><b>Gerontology:</b> Biological &amp; psychological theories of aging The interrelation of aging and disease and concepts of death and dying O.T. assessment in geriatrics</p>
3	<p><b>Dermatology:</b> Leprosy Psychosocial implication of Leprosy &amp; need for intervention by O.T. O.T. treatment in acute and chronic dermatological conditions.</p>
4	<p><b>HIV:</b> The stage of infection Physical psychological environmental needs of patient with HIV infection Assessment processes and development of appropriate treatment planning.</p>
5	<p><b>Pulmonary Conditions:</b> Air entry and secretions by auscultation Pulmonary function tests and their application in rehabilitation General approach of O.T. in Pulmonary conditions such as Chronic bronchitis, bronchitic asthma, emphysema, emphysemas, COPD, ILD, T.B., Lung abscess, occupational lung diseases Postural deviations after thoracic surgery and O.T. management Functional performance – capacity to perform occupational activities including leisure and self-care Motor performance-functional mobility, strength and endurance Activities to improve lung capacity using diaphragmatic and pursed lip breathing patterns and incorporate correct breathing patterns in day to day living Energy conservation techniques and work assessment Development of pulmonary endurance and work capacity</p>
6	<p><b>Cardiac Conditions:</b> Clinical applications of O.T. with respect to common cardiac conditions such as Ischemic heart disease, Acute myocardial infarction, hypertension, cardiac myopathies, congenital and acquired heart diseases, valvular diseases and following interventions like CABG, angioplasties, valve replacements. The clinical presentations with respect to physical findings, pathophysiology and investigative reports. Exercise protocol using modalities like treadmills, ergometers, step-equipments, walking, brisk walking, spot jogging exercises.</p>

	<p>Exercise with respect to risk stratification, indications, dose, mode, and methods.</p> <p>Exercise with respect to training effect for work, activity and sports prescription.</p> <p>Exercise with respect to performance based on parametric evaluation-ECG and hemodynamic responses.</p> <p>METS and its classification.</p> <p>Work simplification and energy conservation techniques based on ergonomic principles, use and application.</p> <p>Work simulation techniques in cardiac dysfunctions.</p> <p>Different components of work assessment in cardiac conditions.</p> <p>O.T. in controlling risk factor like obesity, smoking, hyperlipidemia, sedentary style, HT, diabetes and family history.</p>
7	<b>Hematological Conditions:</b> Explain the term hemophilia Obesity

### OT IN SURGICAL CONDITIONS- OCT14302

UNIT	CONTENTS
1	<p><b>Burns:</b></p> <p>Definition</p> <p>Classification</p> <p>Stages of burns</p> <p>OT in burns</p> <p>Pre-graft Treatment,</p> <p>Post graft treatment</p> <p>Rehabilitation of burns.</p>
2	<p><b>Amputation:</b></p> <p>Etiology</p> <p>Surgical management</p> <p>Special consideration and problems</p> <p>Psychological adjustment</p> <p>Levels of amputation</p> <p>Accessories and component of prosthesis</p> <p>Upper and lower extremity</p> <p>Prosthetic training program for upper and lower extremity.</p>
3	<p><b>Tendon Injuries:</b></p> <p>Etiology</p> <p>Surgical treatment</p> <p>OT treatment.</p>
4	<b>Crush Injuries of hand:</b>

	Tendon and Nerve injuries and their re construction Pre and Post operative management in OT and splinting.
5	<b>Cancer Rehabilitation:</b> Preventive, restorative, supportive and palliative aspects of radical mastectomy, head and neck cancer.
6	<b>Vascular Condition:</b> Peripheral vascular diseases and OT.
7	<b>Occupational Therapy in Blind:</b> Definition and classification Mobility technique Communication skills  Sensory re-education Emotional and physiological aspects of blindness Facilities for blind Prevention of blindness.
8	<b>Occupational Therapy in Deaf – Dumb:</b> Definition and classification Communication skills Types and uses of hearing aids  Emotional and physiological aspects Facilities of deaf Prevention of deafness Vestibular affectations and re-training.

## HOSPITAL TRAINING-III-TRN14301

### YEAR IV

### ADVANCED OCCUPATIONAL THERAPY- OCT14401

UNIT	CONTENTS
1	<b>Ethics in Occupational Therapy :</b> Key terms in ethical issues Ethical jurisdiction of the standards and code of ethics of All India O.T. Association Current ethical dilemmas in occupational therapy Issues and conflicts involved and solutions to the dilemmas
2	<b>Service Management:</b> Management functions and strategies Documentation

	Quality Assurance Fiscal Management and Marketing.
3	<b>The human and non-human environments and the occupational therapy process-</b> Definition of environment Components of human and non-human environments Science of environmental psychology Application to practice of occupational therapy.
4	<b>Industrial Rehabilitation:</b> Potential sources and product lines of referral for an industrial rehabilitation program Classification of work levels Industrial rehabilitation service Vocational evaluation & rehabilitation.
5	<b>Home Care and Private practice-</b> Home care delivery model, its implementation Parameters of home care Delivery service  Skills required for effective practice Constraints Influence of various issues that shape home care practice Role of practitioner in private practice.
6	<b>Wellness programs &amp; Preventive Therapy-</b> Definition of health Health promotion Wellness Role of occupational therapist.
7	<b>Technology:</b> Assistive and computer technology application in occupational therapy Use of computer as a tool in clinical implementation  Software selection-criteria and method Strategies and methods of clinical implementation in motor sensory, cognitive, ADL, effective domain.
8	<b>Stress Management:</b>  Stress response Techniques in stress management
9	<b>Introduction to Sports Medicine:</b> Common sports injuries Assistive & adaptive equipment Splints and adaptation methods Role of Occupational Therapist in return to sports and athletic activities.
10	<b>Introduction to Human Sexuality in relation to disability management in O.T.:</b> Definition of Sexuality Sexuality developmental milestones and response cycle Role of nervous system in sexual functions Effect of nervous, cardiac and pulmonary dysfunctions on sexual functioning Levels and formats provided to patients regarding sexual counseling appropriate to occupational therapy.

**OCCUPATIONAL THERAPY IN ORTHOPEDIC CONDITIONS-**  
**OCT14402**

UNIT	CONTENTS
1	Orthopedic clinical evaluation and treatment.
2	Congenital orthopedic conditions and O.T. Management
3	<b>O.T. for fractures of upper and lower limbs:</b> Management of complications Internal fixation External fixation Excision and replacement arthroplasty.
4	Occupational Therapy management including PNF techniques for Erb's Palsy, Brachial plexus palsy and peripheral nerve injuries.
5	Injuries and pathological conditions of vertebral column and spinal cord, spinal orthosis and O.T. management.
6	Injuries at and around joints of upper and lower extremity, arthroscopic and surgical intervention O.T. treatment
7	<b>Poliomyelitis and Cerebral palsy:</b> Reconstructive surgeries including lamb Lengthening procedures and orthotic management
8	<b>Arthritis:</b> Surgical and rehabilitation program.
9	Pain management in Occupational Therapy.
10	Cumulative trauma disorders and application of ergonomic principles in Management of such conditions.
11	Metabolic disease of bone Rickets, Osteomalacia, Osteoporsis, Gout and O.T. Management.

**OCCUPATIONAL THERAPY IN NEUROLOGICAL AND**  
**DEVELOPMENTAL CONDITIONS- OCT14403**

UNIT	CONTENTS
1	<b>Neurophysiological:</b> Neurophysiological principles applied to therapeutic procedures in the treatment of pyramidal, extrapyramidal, cerebellar and lower motor neuron lesions. 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.
2	<b>Cognitomotor Perceptual Skills:</b> Evaluation

	Scales used Training and models of cognitive rehabilitation.
3	<b>Preventive, curative and rehabilitative Occupational Therapy for common neurological conditions:</b> Preventive, curative and rehabilitative Occupational Therapy for common neurological conditions such as stroke, traumatic head injury, brain tumors, cortical lesions, Vestibular Dysfunctions, Parkinson's disease, chorea, Athetosis, Cerebral Dysfunctions, Multiple Sclerosis, Motor Neurone Disease, Human Immuno-deficiency virus. Syringomyelia, Transverse myelitis, Tabes dorsalis, spinal cord tumours, Peripheral neuropathies, Myopathy, Myasthenia gravis.
4	<b>Management of Dysphagia:</b> Normal physiology of swallowing  Disease process resulting into dysphagia State guidelines for assessment and treatment of patients with dysphagia.
5	<b>Occupational Therapy for Development Disabilities:</b> Occupational Therapy with neonates and infants Cerebral Palsy: Classification, aetiology 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.
6	<b>Infective affectations of the brain:</b> meningitis, encephalitis, cerebral malaria
7	<b>O.T. for cranial Nerve dysfunction</b>

**OCCUPATIONAL THERAPY IN PSYCHIATRIC CONDITIONS-**  
**OCT14404**

UNIT	CONTENTS
1	<b>Theoretic basis of occupational therapy:</b> Frames of references used in psychiatric occupational Therapy, Model of Human Occupation, Behaviour, Developmental, Sensory Integrative, Cognitive disability and Psychoanalytical.
2	General and Specific objectives and prescription of psychiatric occupational therapy.
3	Methods of evaluation of psychiatric patient in occupational therapy.
4	<b>Activity and job analysis:</b> Meaning and therapeutic utilization of activities in psychiatric Occupational therapy.
5	<b>Types of therapeutic media used in psychiatric occupational therapy:</b> Types of Therapeutic media used in, Psychiatric Occupational Therapy, Behavior therapy, Projective techniques, Industrial activities, Arts and creative activities, Social skills training, Group therapy, Sensory integrative therapy, Recent advances.
6	<b>Long term &amp; Short term OT Intervention:</b> Long term & short term OT intervention based on current practice in Schizophrenic disorders. Mood disorders, Dementia, Generalized anxiety disorders & Phobias, Conversion & Dissociative reactions, OCD,



	Substance related disorders, Psychiatric aspect of AIDS, Seizures disorders, Physiological factors affecting medical conditions, (Psychosomatic conditions) and Personality disorders, Eating disorders, Learning disorders Autism
7	<b>Role of OT as a team member in CBR:</b> Half way homes, day care centers. Sheltered workshops, long term care, psychiatric unit of acute care hospitals, child guidance clinic.

**COMMUNITY BASED OCCUPATIONAL THERAPY AND  
REHABILITATION- OCT14405**

UNIT	CONTENTS
1	<b>CBR:</b> Definition of CBR Models, Structure, Process, Outcome, Role of O.T. and the contributions of other health professionals Differentiate CBR/IRB Occupational Therapy for disaster management.
2	<b>Concepts of Health and Disease</b> – definition and dimensions of health.
3	<b>Social factors and health- concepts in epidemiology:</b> Sociology and cultural factors in health and disease Social problems of disabled workers.
4	<b>Occupational Health-</b> Definition of occupational health, Role of O.T. in occupational disorders like occupational lung disease. Medical and engineering measures in prevention of occupational diseases.
5	<b>Child survival and safe motherhood program:</b> Role of CSSM as a national program, Role of O.T. in orthopedic and neurological conditions in new born such as CDH, CTEV, CP, spine bifida AMC in community setting.
6	<b>Nutrition and Health:</b> Constituents' of food Their functions and national nutritional programs
7	Anthropology, ethnography, skill transfer, knowledge, attitude and community education, appropriate technology.
8	International classification of functioning, disability and health: WHO's ICF 2001
9	<b>Disability Problems:</b> Magnitude of disability problems Its causes and future trends.

10	Persons with disability act (1995), National Trust Act 1999, RCI Act 1992 by Government of India.
11	Prevention and detection of disability and role of O.T. in it.
12	<b>Organization and Administration:</b> Principles of organization and administration Organizational chart Starting a new rehabilitation centre- procedure, survey, interview and planning.
13	<b>Assistive Technologies:</b> Prosthesis – Definitions, Aim, Principles, Amputees training and evaluation Upper extremity prosthesis – Types of amputee, Types and components of prosthetic prescription criteria, checkout, pre-prosthetic and prosthetic training. Lower extension prosthesis – Biomechanical consideration, Types and components prosthesis, pre and post prosthetic, training and checkout. Prosthetic deviation in A/K and B/K Prosthesis. Orthosis : Definition, classification, indication, principles, material used, Orthotic components, Terminology used in the upper, spinal and lower limb orthosis, Spinal orthosis: classification, principle and indication in brief description of each Cervical orthosis : Types, goals and brief description Upper extremity orthosis: Types, goals, and brief description and fabrication of shoulder, elbow, and wrist hand orthosis. Lower extremity orthoses: Brief description of hip, knee and ankle orthosis and shoes modification.
14	Wheelchair selection of process, adaption and appropriate teaching.
15	Development of innovative low cost aids and appliances in respect to therapeutic equipment and adaptive device, splint and mobility aids.

## HOSPITAL TRAINING-IV-TRN14401