EXAM SCHEME AND SYLLABUS

(Applicable for the batches admitted from the Academic Session 2023-24 onwards)

Bachelor of Occupational Therapy

(BOT, 4 Year Degree Programme)

FACULTY OF PARAMEDICAL SCIENCE & ALLIED HEALTH SCIENCE

Chirayu University

Bhopal, MP 462030, India

Regulation For The Degree of Bachelor of Occupational Therapy
(4½ Year Degree Course)

AIMS:

The aims of a Bachelor of Occupational Therapy (BOT) program are designed to provide students with the necessary knowledge, skills, and attitudes to become competent and effective occupational therapists.

OBJECTIVES:

Develop Core Competencies:
Provide students with a solid foundation in the theoretical and practical aspects of occupational therapy.
Develop critical thinking, problem-solving, and clinical reasoning skills.

Understanding Human Anatomy and Function:
Equip students with a thorough understanding of human anatomy, physiology, and psychology.
Enable students to comprehend the interplay between physical, cognitive, emotional, and social aspects of human function.

Clinical Skills Development:
Train students in a variety of therapeutic techniques and interventions to address physical, cognitive, and psychosocial challenges.
Provide hands-on experience through clinical placements to apply theoretical knowledge in real-world settings.

Professional Ethics and Standards:
Instill a strong sense of professional ethics, including respect for client autonomy, confidentiality, and cultural sensitivity.
Familiarize students with the code of ethics and standards of practice established by relevant professional organizations.

Communication and Interpersonal Skills:
Develop effective communication skills for interacting with clients, their families, and other healthcare professionals.
Foster strong interpersonal skills to build therapeutic relationships with clients and collaborate with interdisciplinary teams.

Community and Population Health Focus:
Promote an understanding of the broader societal factors influencing health and well-being.
Encourage engagement in community-based initiatives and the promotion of health and wellness.

Research and Evidence-Based Practice:
Equip students with the ability to critically appraise and apply research findings to inform their practice.
Foster a commitment to ongoing professional development and staying updated on current evidence-based practices.

Advocacy and Leadership:
Instill a sense of advocacy for clients' rights and needs within the healthcare system.
Develop leadership skills to contribute to the advancement of the occupational therapy profession.

Cultural Competence:
Promote cultural competence to ensure sensitivity to diverse backgrounds and facilitate effective engagement with clients from various cultural, ethnic, and socioeconomic backgrounds.

Lifelong Learning:
Foster a commitment to continuous learning and professional development throughout the occupational therapy career.

By achieving these aims and objectives, graduates of a Bachelor of Occupational Therapy program are prepared to enter the workforce as competent, compassionate, and ethical occupational therapists

COURSE STRUCTURE:
The Bachelor of Occupational therapy (BOT) program is Four & Half year (4 ½ year) Degree Program.

DURATION OF THE PROGRAM:
1.BOT I YEAR
2.BOT II YEAR
3.BOT III YEAR
4.BOT IV YEAR

TEACHING DAYS: Each academic year shall consist of 160 teaching days.

INTERNSHIP: There shall be six months of Internship after the final examination for candidate declared to have passed the examination in all the subjects.

Syllabus for Bachelor of Occupational Therapy PART - I

1. The Part-I Examination shall consist of the following subjects (Teaching hour approximately for lectures to be delivered and practical classes to be held in each subject indicated against each subject).

No	SUBJECT	LECTURES	PRACTICAL
1.	Human Anatomy	140	60
2.	Human Physiology including Bio chemistry	160	60
3.	Pathology & Pharmacology including Bacteriology	100	-
4.	Psychology	80	-
5.	Principles of Occupational Therapy	160	140
6	Occupational Therapy Clinicals	--	500

BOT 1st Year Scheme of Examination

The full marks for each subject and the minimum marks required for passing the same shall be as follows:

No	Subject	Written	Int. Asst.	Min Marks (Wrt. + Int Asst.)	Practical	Int. Asst.	Min Marks (Pract + Int. Asst.)	Total Marks
1	Human Anatomy	80	20	50	80	20	50	200
2	Human Physiology including *Bio-chemistry	80	20	50	80	20	50	200
3	Pathology & Pharmacology	80	20	50	-	-	-	100
4	Psychology	80	20	50	-	-	-	100
5	Principles of Occupational Therapy	80	20	50	80	20	50	200

*University practical exam for Physiology subject only

PAPER I

HUMAN ANATOMY

Theory - 140 hrs. Practical / Laboratory- 60 hrs

GENERAL ANATOMY [80 marks]

[80 hrs]

Introduction, scope of anatomy, cell as a structural and fundamental unit, Organization of tissue organs and system, Anatomical position of the body, Anatomical terms.

Skin and the appendages of the skin.

Muscles: Voluntary and Involuntary and cardiac muscles, short description of the structure of different muscles. [03 hrs]

Muscles: Classification of voluntary muscles. Origin and Insertion of upper extremity, lower extremity, face, trunk head & neck muscles, Tendon, Aponeurosis, Isometric and Isotonic contraction of muscles.

Bones: composition and functions, classification of bones according to morphology and development, various terms and markings on the bones. [02 hrs]

Bones: Development of bones, parts of long bones and blood supply of bones, general remarks about bones of skull, thorax, vertebral column and bones of upper & lower extremities in detail.

Joints: Definition, classification of joints structure and cartilaginous joints.

Joints: Structure of synovial joints, Movements of joints, blood supply of bones and joints and Bursa, close pack and loose pack position of the joints.

Nervous system: Nerve cell, Synapse and reflex.

Nervous system: organization of central nervous systems, Spinal Nerves and nerve endings.

11.Cardiovascular system: Arteries, Veins, Capillaries, and Collateral circulation.

12. Cardiovascular system: Blood as a connective tissue, Gross anatomy of Heart, large blood Vessels.

13. Respiratory system: General outline of respiratory passages, gross anatomy of Lung, Pleura.

14. Respiratory system: Broncho-pulmonary segments, Inter-costal muscles and Mechanism of respiration.

15. Digestive system: General idea or outline of gastro- intestinal tract and associated glands.

16. Excretory system structure and function of kidney, general outline of Ureters, Urinary bladder and Urethra.

17. Reproduction system: general outline of male and female genital organs.

18. Endocrines: Definition, Structure in general.

19. Lymphatic system:Lymphatic circulation, Lymph nodes and Lymphoid tissue.

20. Neuro-anatomy:- Gross structure of Sulci and Gyri and various areas of cerebral hemispheres, Thalamus, Hypothalamus, Basal Ganglia. Cerebellum.Pons, Medeulla, Spinal Cord.Ascending tracts & Descending tracts Clinical application of Knowledge of the tracts. Autonomic nervous system. Nervous control of the urinary bladder and bladder dysfunction.

Demonstration [60 hrs]

1. Muscles of the whole body.
2. Demonstration of organs in thorax and abdomen.
3. Demonstration of viscera in head, face and neck.
4. Demonstration of all the glands in the body.
5. Identification of bony prominences on inspection and palpation in the body, especially of extremities.
6. Points to palpate nerves and arteries.
7. Identification of prominent muscles.
8. Extra-ocular muscles and salient points about the eye ball.
9. Demonstration on Brain.

Kinesiology

- Basic Concepts
- Muscular system
- Joints
- Machinery Musculoskeletal system
- Principles of Motion
- Principles of force and work
- Basics of the development of motor skill
- Principles of stability
- Postural principles

Regional Anatomy

Superior Extremity:

Osteology: Clavicle, Scapula, Humerus, Radius, Ulna, Carpals, Metacarpals

Soft parts: Breast, Pectoral region, Front of arm, Back of arm, Cubital fossa, front of forearm, back of forearm, nerves and vessels of forearm, palm, Dorsum of Hand, Shoulder girdle, joints of hand.

Inferior Extremity

Osteology: Hip bone, Femur, Tibia, Fibula and Patella, Tarsal, Metatarsals.

Soft parts: Front of thigh- Femoral canal and femoral hernia, Adductor canal, medial compartment of thigh, gluteal region, Back of thigh, Popliteal fossa, Anterior compartment of leg, posterior compartment of leg, sole of foot, venous drainage of leg, hip joint, ankle joint, tarsal joints.

3.Trunk:

Osteology: Cervical, Thoracic and Lumbar Vertebra, Sacrum, Coccyx and Ribs.

Soft tissue: Inter-vertebral joints, costo-vertebral joints, Inter-vertebral Disc; Ligaments and Muscles.

4. Skull as a whole and mandible.

5. Demonstration of Dissected parts.

Parts of Limbs, Trunk, Brain, Thorax and Abdominal Contents.

Books Recommended:

1. An Introduction to fundamental of anatomy by David Sinclair (Blackwell Publication).
2. Gray's Anatomy
3. Cunningham's Manual of Practical anatomy
4. Anatomy and physiology by Smout and Macdonald(Edward Arnold)
5. Kinesiology by Katherine (Saunders Co).
6. Clinical Kinesiology by Brunnstrom.
7. Kinesiology and Applied Anatomy by Resch-Bruke(Lee & Febigar)
8. Applied anatomy and Kinesiology by W. Bower & H. Stone(Lee & Febigar)
9. Caties primary anatomy by Bestmaji J.
10. Principles of anatomy and Physiology by Tortora & Grabowski (Harper Collons College Publishers)
11. Anatomy by B.D. Chourasia.

Special Note: Special emphasis should be on musculo skeletal anatomy & Neuro anatomy

PAPER-II

HUMAN PHYSIOLOGY INCLUDING BIOCHEMISTRY

Theory: 160 hrs Practical: 60 hrs

Section A 40 (marks)

HUMAN PHYSIOLOGY [100hrs]

Objectives: At the end of the course, the candidate shall-

1. Acquire the knowledge of the relative contribution of each organ system in maintenance of the milieu interior [Homeostasis]
2. Be able to describe physiological functions of various systems, with special reference to Musculo-skeletal, Neuro -motor, Cardio-respiratory, Female urogenital function and alteration in functions with ageing.
3. Analyze physiological response & adaptation to environmental stresses with special emphasis on physical activity and temperature.
4. Acquire the skill of basic clinical examination, with special emphasis to Peripheral & Central Nervous system, cardiovascular & Respiratory system, & Exercise tolerance/ Ergometery.

Note: Group discussions, seminars and tutorial will be on the topics covered in didactic lectures.

Syllabus-

1. **GENERAL PHYSIOLOGY**
    1. Structure of cell and its functions
    2. Transport across cell membrane
    3. Body fluids- Homeostasis
2. **BLOOD**
    1. Composition, function and physical properties of blood
    2. Plasma protein and their functions
    3. Erythropoiesis, leucopoiesis and thrombopoiesis in brief
    4. Hemoglobin and its functions
    5. Structure and function of leukocytes
    6. Immunity
    7. Physiology of clotting mechanism and fibrinolysis
    8. Blood group and physiological basis of transfusion
3. **NERVE**
    1. Structure, classification & properties.
    2. R.M.P.
    3. Action potential
    4. Propagation of nerve impulse.
    5. Degeneration & regeneration
    6. Reaction of degeneration [retrograde]

4. MUSCLE

1. Structure, properties, classification, excitation/contraction coupling
2. Motor unit- Electromyography
3. Neuro-muscular transmission
4. Physiological basis of myopathies.

5. NERVOUS SYSTEM

15. Organization of Nervous system.
16. Neuron and Neuralgia
17. Synapse: Properties and Synaptic transmission.
18. Reflex arc, its components, properties, type and neurological impairments.
19. General sensations and their properties.
20. Ascending tracts of the Spinal cord and effects of their lesions.
21. Pain and physiological Analgesia.
22. Motor neurons, Descending tracts and their applied aspects.
23. Regulation of Muscle Tone by Spinal and Supra-spinal mechanism.
24. Function of Brain -stem, Cerebellum, Basal Ganglia and Motor cortex.
25. Control of Voluntary movement
26. Regulation of posture and equilibrium, vestibular apparatus.
27. Broad functions of Thalamus, Hypothalamus, Major lobes of Cerebral cortex and Ascending Reticular Activation System
28. Limbic System
29. Learning, memory, speech and conditional reflexes.

6. SPECIAL SENSES

1. Functional anatomy of the Eye
2. Optics of Vision
3. Retinal Function
4. Visual Pathways
5. Mechanism of Hearing.
6. Sensation of Taste and Smell.

7. AUTONOMIC NERVOUS SYSTEM

1. Functioning of Autonomic Nervous System with special reference to micturition, defecation and labour
2. Higher neural regulation of ANS.

8. SKIN AND BODY TEMPERATURE REGULATION

1. Functional anatomy of the Skin and its function
2. Different mechanisms involved in body temperature regulation.
3. Physiological basis of Pyrexia and Hypothermia.

9. CARDIOVASCULAR SYSTEM

1. General introduction of cardiovascular systems.
2. Structure and properties of Cardiac muscle.
3. Cardiac cycle and Heart sounds.
4. Interpretation of normal Electrocardiogram.
5. Cardiac output and cardiac failure.
6. Venous return,
7. Heart rate and its regulation.
8. Structure and organization of vascular tree.
9. Arterial blood pressure and pathophysiology of Hypertension.
10. Characteristic of Coronary circulation and pathophysiology of Coronary artery disease
11. Capillary circulation and physiological basis of Edema.
12. Patho-physiology of Shock.

10. RESPIRATORY SYSTEM

1. Functional anatomy of Respiratory System.
2. Mechanics of breathing: Mechanism of inspiration and Expiration, intra-pleural and intra-alveolar pressures, Compliance, Surfactant, Air-way resistance and work of breathing.
3. Respiratory membrane and diffusion of gases.
4. Composition of gases and Partial pressures.
5. Oxygen and Carbon-dioxide transport.
6. Lung Volumes, Capacities and Lung function tests.
7. Nervous and Chemical control of breathing.
8. Physio-clinical aspects of Dyspnoea, Apnoea, Asphyxia, Hypoxia, Cyanosis, Breath holding, high and Low atmospheric pressures.

11. DIGESTIVE SYSTEM.

1. Functions of (a) Saliva, (b) Gastric juice, (c) Pancreatic juice (d) Succus entericus, (e) Bile.
2. Movements of G.I.T.
3. Functions of Liver.

12. RENAL SYSTEM

1. Functions of Kidney
2. Formation of Urine.
3. Physiology of Micturition- Neurogenic bladder.

13. ENDOCRINE

1. Role of Hypothalamus as an endocrine gland.
2. Functions and hypo & hyper secretion of hormones of
   a. Pituitary

b. Thyroid
c. Parathyroid
d. Adrenal
e. Endocrine part of pancreas.

14. REPRODUCTIVE SYSTEM

1. Spermatogenesis, Functions of Testosterone.
2. Ovarian and Menstrual Cycle and their hormonal control.
3. Hormones of Ovary and their functions.
4. Physiological basis of Fertilization, Implantation, Pregnancy, Parturition and Lactation.
5. Contraception.

15**. EXERCISE PHYSIOLOGY**

1. Effects of acute & chronic exercises
2. Oxygen/CO2 transport – O2 debt.
3. Effects of Exercises on muscle strength, power, endurance, B.M.R., R.Q.- hormonal & metabolic effects- respiratory & cardiac conditioning.
4. Aging.
5. Training, fatigue & recovery.
6. Fitness- related to age, gender, & body type.

Note:- For Section – A The long question should be asked form the topic 3,4,5, and short notes can be form any other topic.

For Section – B The long question should be asked form the topic 9,10,15 and short notes can be form any other topic.

Text Books

1. Textbook of physiology- vol. & II – A.K. Jain.
2. Medical physiology – R.L. Bijlani.
3. Concise medical physiology – S. Choudhari.

Reference Books

1. Textbook on medical physiology – Guyton & Hall.
2. Review of medical physiology – Ganong.

Practical

1. Hematology –[Demonstration only]

2. Study of Graphs

a. Skeletal muscles-

i. Simple muscle twitch
ii. Effect of increasing strength on SMT.
iii. Effect of increasing load on SMT.
iv. Effect of pre load & after load (Starling's law).
v. Effect of temperature.
vi. Effect of two successive stimuli.
vii. Effect of fatigue.
viii. Effect of multiple stimuli & tetanus.

b. Cardiac muscles-

i. Simple myo-cardiogram.
ii. Effect of temperature on the myo-cardiogram.
iii. Effect of drugs.
iv. All or none law.
v. Staircase phenomenon.

3. Physiology Fitness

Breath holding
mercury column test
cardiac efficiency test – Harvard step test – Master step test

1. Recording of arterial blood pressure – effects of change in posture & exercise on A.B.P.
2. Stethography
   i. Effect of deglutition.
   ii. Effect of voluntary hyperventilation
   iii. Effect of exercise.
3. Spirometry

   - Lung volumes and capacities.

4. Mosso's finger ergography and bicycle ergography
5. Perimetry
6. Clinical examination of

   - Respiratory system
   - Cardiovascular system
   - Central Nervous system
   - Special senses

Section - B [40marks]

BIOCHEMISTRY [60 hrs]

*Only theory paper, No university practical examination

Course Objective

After 60 hours lecture and demonstration in Biochemistry this course shall provide the student with basic Biochemistry knowledge with special emphasis on clinical understanding of biochemistry processes. Students shall be able to relate these processes with underlying mechanism of physiotherapeutics.

I. Basic Biophysics:

Concept of Acid base, buffer, Henderson- Hasselbach equation, brief knowledge of biophysical process such as Osmosis. Viscosity, Surface tension, Dialysis with special emphasis on their biomedical implication. A brief study of Radio-isotopes and their clinical applications

II. General Biochemistry with Biomedical functions

1.Carbohydrates: Definition, Classification with example and General functions.

2.Lipids: Definition Classification and General Functions. Essential Fatty Acids, Cholesterol, blood lipids, Brief review of Lipoproteins.

3. Proteins: Definition, Classification and Biomedical importance, Study of Hemoglobin and Immunoglobins with function, plasma and Functions.

4. Nucleic Acids: Brief overview of the structure of RNA and DNA including Nucleosides and Nucleotides. Study of few biologically important nucleotides.

5. Enzymes: Definition, Classification with example, Factors affecting enzyme action, brief study of enzyme inhibition, clinical importance of enzymes.

6. Vitamins: Definition, Classification and function. Dietary source, Daily requirements and Deficiency Disorders.

III. Bioenergetics

Study of Plasma Membrane, Review of laws of thermodynamics as applicable to biological systems. Concept of free energy charge. High-energy compounds and Respiratory chain.

IV. General Metabolism

(Note: A brief outline of metabolic pathway herein is indicated.Details and Structure are to be avoided).

1.. Carbohydrate metabolism: Glycolysis, TCA,Glycogen metabolism, blood sugar regulation, Diabetes and Diabetic Ketoacidosis.

2. Lipids Metabolism: Beta-oxidation of Fatty acids, Fatty acid synthesis, cholesterol synthesis, Ketosis And Fatty liver.

3. Protein Metabolism: General reaction of Amino acids, Formation and fate of Ammonia, Urea cycle.
4. Purine and Pyrimidine: Only catabolism of Purine to be Stressed in detail with special emphasis on Gout. General breakdown of Pyrimidine and associated disorders.

V. Water and Electrolyte Balance

General outline of fluid compartments of the body with their water and electrolyte content and balance,

Dehydration.

VI. Nutrition

Principal of Nutrition of carbohydrates, Protein and lipids. Caloric requirement and Balance diet.

Book References

1. Textbook of Biochemistry by West and Todd.
2. Textbook of Medical Biochemistry by Chatterjee and Shinde
3. Principles of Biochemistry by A. Lehninger.
4. Textbook of Biochemistry by A.C. Deb

PAPER - III

PATHOLOGY & PHARMACOLOGY INCLUDING BACTERIOLOGY

Total hrs: 100 hrs

Section - A - [40 marks]

PATHOLOGY & BACTERIOLOGY [60hrs]

Theory: 52 Hrs. Practical Demonstration 8 Hrs.

Theory

1. Concept of Diseases, Classification of Lesions.
2. Clean & Brief concepts of inflammation and Repair, Degeneration, Necrosis and Gangrenes.
3. Deficiency Diseases vitamin A, vitamin B, vitamin C, vitamin D.
4. Vascular disturbances: Oedema, Thrombosis, Embolism, Hemorrhage and Shock.
5. In brief: About Anemia, Leukemia, Hemorrhagic disorders.
6. Clear Concepts about Tumors, Definition, Classification, Etiology and spread of tumors, Benign versus Malignant tumors.
7. In brief about:
   A. Respiratory diseases- Pneumonia, Bronchitis, Asthma, Emphysema, Tuberculosis, Lung cancers and Occupational Lung diseases.
   B. C.V.S. – Rheumatic heart disease, myocardial infarction, Atherosclerosis, congenital heart disease.
   C. Alimentary system – Peptic ulcer, Carcinoma of stomach

Ulcerative lesions of Intestine.

(D) Liver – Hepatitis, Cirrhosis and Hepatoma.

(E) Pancreas – Pancreatitis, Carcinoma of Pancreas, Diabetes.

Details about:

Central nervous system – Meningitis and Encephalitis, brief outline of C.N.S. Tumours and peripheral nerve lesions.

Bones and Joints – Osteo myelities, Osteoarthritis, Septic, Arthritis, Gout, Rheumatic Arthritis and Bone Tumors.

Muscle – Poliomyelitis, Myopathies, Volkman's ischemic contracture.

Skin – Scleroderma, Psoriasis, Autoimmune disorders.

In brief about

(a) Urinary system – Nephrotic syndrome, Nephritis, Glomerulonephiritis.

(b) Prostate –Prostatitis, BPH, Carcinoma of Prostate.

(c) Endocrine – Thyroid, Thyroiditis, Thyroid Tumours.

(d) Salivary gland – Salivary gland tumours.

Note: Questions shall be from the theory part only

Practical

1. Normal total and differential WBC count, Hemoglobin, RBC.

Demonstration of slides:

- Anemia
- Leukemia
- Acute inflammation – Appendix
- Chronic inflammation – Non – specific
- Tuberculosis of lymph Node – specific inflammation
- Leprosy – Skin and Leprabacilli
- Squamous cell carcinoma – skin
- Osteogenic sarcoma – Bone tumor
- Osteoclastoma – Bone tumor
- Ewings – Bone tumour
- Multiple Myeloma – Bone tumor

Section - B [40 marks]

PHARMACOLOGY [40hrs]

I. General Pharmacology

1. Definition of drug, Pharmacokinetics and Pharmaco dynamics.
2. Broad categories of adverse drug reactions.
2. Alcohols.
3. Analgesics and Antipyretics, anti-inflammatory drugs.
4. Sedatives.
5. Stimulants.
6. Drugs acting on muscles- Muscle relaxants, Muscle stimulants.
7. Anti-parkinsonism agents
8. Drugs modifying B.P.
9. Hypolipidemia.
11. Anticoagulants.
12. Thyroxin and Anit thyroid drugs.
13. Anti-diabetics.
14. Glucocortics.
15. Calcium, Phosphorus, Calcitonin and Parathormone.
16. Narrow spectrum antibiotics.
17. Broad-spectrum antibiotics.
18. Anti-cancer drugs.
19. Drugs acting on respiratory systems: Respiratory stimulants and respiratory depressants, Bronchodilators, Expectorants. Anti-Asthmatics, Anti-tussive.
20. Vitamins.
21. Overin hormones, Anabolic steroids, Estrogen, Progesterone, Androgen.
22. Locally acting drugs: Anodies ,Local anesthetic drugs, Counter-irritants Rubefacient, Soothing agent, Anti-microbial. [02 hrs]

Book Reference.

1. Pharmacology by Satoskar
2. Clinical Pharmacology by Lawrence.
3. Textbook of Pharmacology by B.N. Ghose.
4. Essentials of medical Pharmacology by K.D. Tripathi.

PAPER-IV

PSYCHOLOGY

Theory: 80 hrs 80 marks

A. GENERAL PSYCHOLOGY: [30hrs]

1. Definition and concept of psychology; Field of application and methods of study of psychology.
2. The respective influences of heredity and environment on the individual.
3. Development and growth of behaviour in infancy and childhood.
4. Motivation: Achievement, affiliation and aggression Maslow's theory.
5. Emotions and emotional development.
6. Learning theories, methods of learning (Pavlov,Thorndike,hull- Toleman)
7. Learning and maturation – special reference to conditioning positive and negative reinforcement interest and in learning.
8. Sensation, perception.
9. Memory, thinking and causes of forgetting.
10. Attention and concentration

B. SOCIAL PSYCHOLOGY [10 hrs]

11. Nature and scope of social psychology.

    1. Social interaction- primary and social stimulation.
    2. Psychology groups and their classification.
    3. Socialization of the individual.
    4. Morals, customs, fashions, propoganda – its technique.
    5. Leadership – Functions, Rol,e and Qualities.
    6. Attitudes and prejudices.
    7. Crowds and Public opinion.
    8. Social changes and progress.

C. CLINICAL PSYCHOLOGY [40hrs]

1. Introduction: Field of application and short history of clinical psychology.
2. Concept of mind: Conscious and unconscious mind (psychological approach).
3. Intelligence and intelligence testing, kinds of mental deficiency.
4. Personality: Concept, influencing factors and tests.
5. Major psychological disorders: Psychoneurosis
    a. Anxiety
    b. Phobia
    c. Obsessive-compulsive reaction.
6. Major psychological disorders: Psychosis
    a. Schizophrenia
    b. Depression

7.Psychosomatic disorders, personality disorders

8. Frustration and conflict.

9. Stress**:** Coping mental mechanism with special reference to normal and abnormal conditions.

10. Counseling: Process, approaches.

a. Directive
b. Non-directives
c. Counseling skills.

Book Reference

1. Introduction to Psychology -N.L. Munn

2. Psychological Testing - A. Anastasi

3. Abnormal Psychology & Modern Life -J.C. Coleman

4. Social Psychology-A Practical manual –Brakewell

5. Clinical Psychology by Koleman.

PAP
ER-
V

PRINCIPLES OF OCCUPATIONAL THERAPY

THEORY 160hrs Practical: 140 hrs

[80 marks]

I. Introduction to Occupational Therapy

II. History and development of Occupational Therapy in India and worldwide Definition, philosophy and scope of Occupational Therapy. Occupational performance model

II. Definition of health rehabilitation team and role of occupational therapy as a team member.

III) Principles of Therapeutic Exercise :

a) Generalized & specific principles
b) Types of Movements, Muscle contraction used in exercise c) Exercise classification & application to activity
d) Physiology of exercise & coordination
d) Objective to develop i) Power ii) Endurance iii) Coordination iv) ROM
e) Progressive resistive exercise (PRE), Regressive resistive exercise (RRE), brief repetitive isometric exercise (BRIME)

IV) Theory of Occupation -

Forms of occupation, occupation as evolutionary trait, Biological dimensions, Social dimensions,
Psychological dimensions of occupation, Application of theory to occupational Therapy

V) Proprioceptive Neuro-muscular facilitation – Basic principles.

VI) Principles and methods of assessment

i) ROM
ii) Muscle Power

V) Activities as a basis of Occupational Therapy

a) Therapeutic Activities – Definition, Classification, Characteristics and scope.

b) Activity Analysis:

a) Principles of activity analysis

b) Biomechanical & sensory

motor c) Adapting & grading

activity

d) Selection of activity

c) Activities classification.

Physically and intellectually remedial activities – strengthening, joint range improvement,

co-
ordination, educational, memory training, perceptual motor training activities , Prevocational and
vocational activities, driving activities, Recreation activities - Group & Individual .

VI) Activities of daily living –definition, classification, characteristics and evaluation.

VII. Basic human growth and development process

a) Principles of Growth, Development and

Maturation. b) Factors effecting growth &

development

c) Reflex Maturation

d) Hand function development

IX. Introduction to Splinting: Definition, Classification, principles, material used in designing & fabrication

PRACTICALS

a) Practical demonstration of Assessment and Recording of muscle testing.

b) Practical demonstration of measurement and recording of joint measurements (Arthromety).

c) Practical demonstration measurement of co-ordination.

e) Practical demonstration of activities of daily living testing.

f) Practical demonstration of different activities leading to strength building, elasticity developing co - ordination improvement.

Book References

1) Muscle Testing & function by F.P. Kendall

2) Occupational Therapy for Physical Dysfunction by C.A. Trombly

3) Measurement of joint motion: a guide to goniomentry by C.C. Norkin & D.J.White

4) Willared & Spackman's Occupational Therapy

5) Introduction to Occupational Therapy by Ann. Turner

6) O.T. Practice skills for Physical Dysfunction by L.V. Pedretti

7) Principle of Exercise Therapy by Dena Gardiner

8) Therapeutic Exercises by J. Basmajian & Wolf

9) Daniel's & Worthingham's Muscle testing.

Syllabus for Bachelor of Occupational Therapy PART – II

The part-II Examination shall consist of the following subjects (Teaching hour approximately for lectures to be delivered and practical classes to be held in each subject indicated against each subject.

No	SUBJECT	LECTURES	PRACTICAL
1.	Medicine including Neurology	100	50
2.	Surgery including Orthopaedics	100	50
3.	Biomechanics & Kinesiology	100	30
4.	Occupational Therapy in Medical Condition Part-I	100	120
5.	Occupational Therapy in Surgical Condition Part-I	100	120
6.	Applied Psychology including psychiatry	100	50
7	Occupational Therapy Clinical	--	800

Scheme of Examination for BOT 2nd year

The full-marks for each subject and the minimum marks required for passing shall be as follows.

No	Subject	Written	Int. Asstt.	Min Marks (Wrt. + Int Asst.)	Practical	Int. Asst.	Min Marks (Pract + Int. Asst.)	Total Marks
1	Medicine including Neurology	80	20	50	-	-	-	100
2	Surgery including *Orthopaedics	80	20	50	80	20	50	200
3	Biomechanics & Kinesiology	80	20	50	-	--	-	100
4	Occupational Therapy in Medical Condition Part-I	80	20	50	80	20	50	200
5	Occupational Therapy in Surgical Condition Part-I	80	20	50	80	20	50	200
6	Applied Psychology including psychiatry	80	20	50	-	-	-	100

*University practical exam for Orthopedics subject only

PAPER-
I

MEDICINE INCLUDING NEUROLOGY

Theory : 100 Hrs Practical : 50 Hrs.

Section – A [50 hrs] [40 marks]
Medicine + Dermatology + Geriatrics
Under this the students should be taught various medical conditions and disease on the following headings:
- I. Definition
II. Etiology
III. Signs & Symptoms
IV. Pathology
V. Investigations
Vi. Differential Diagnosis
VII. Management.

General Medicine

A. Infections

Outline briefly the Etiology, symptoms and brief management of the following disease. Bacterial – Tetanus, Typhoid.
Viral – Herpes simplex, Herpes Zoster, Measles, Hepatitis –B. and HIV. Protozal – Filariasis, Malaria, Amoebiasis**.**

B. Diseases of blood.

Define and describe clinical aspects of Nutritional Anaemias.
Brief description of Bleeding Disorder with emphasis to Haemophilia. Lymphadenopathy and splenomegaly.
Leukaemia – acute and chronic.

C. Diseases of Liver

Jaundice
Viral Hepatitis.
Cirrhosis of
Liver

D. GIT Diseases

Brief description

1.Peptic Ulcer
2.Diarrhea and Dysentery.

E. Renal Diseases

Brief description of acute and Chronic renal Failure.
Urinary Tract Infection.
Acute Nephritis, Nephrotic Synodrome.

F. Nutritional and Metabolic Disease.

1. Balanced normal diet.

2. Protein Calorie Malnutrition

3. Avitaminosis of both water and fat-soluble vitamins.

Diabetes mellitus – Definition, Classification and complications, brief description of management of diabetes mellitus.

Obesity – Etiology and management.

Hyper and Hypo-thyroidsm.

Calcium Homeostasis.

Gigantism and Acromegaly.

G. Diseases of Bones, Joints and Connective tissue

1. Brief introduction to understanding of Auto immune diseases.
2. Rheumatic fever and Rheumatoid arthritis – Aetio pathogenesis, Clinical features, complications, diagnosis and briefly outline the management.
3. Brief description of Systemic Lupus Erthematosus.
4. Polyarteritis Nodosa, Dermatomyositis, Scleroderma.
5. Osteoarthritis – Aetiopathogenesis, clinical feature, diagnosis, complication and management.

H. Genetics and Diseases

1. Common inherited disorders.
2. Prevention of genetic disorders**.**

I. Miscellaneous

1. Allergy & Drug reactions.

J. Dermatology

Common skin infections.
Psoriasis
Leprosy- aetio pthogenesis, clinical features and treatment.
Venereal diseases – Syphilis, HIV etc., brief description and prevention (lecture demonstration only).

K. Geriatrics

Common Geriatric Disorders and their management

L. Radiology

(Both in normal and Pathological conditions).
Radiology of Bone and joints.
Radiology of chest including Heart.

Note:- The long questions should be asked from the topic A,B,F,G, and short notes can be asked from any other topics

Practical:-

Students shall be posted for one month in general Medicine ward. They shall do clinical checking and ward work to acquaint themselves to General Medicine.

Book References:-

1. Davidson Principles and Practice of Medicine (Churchill Livingstone)
2. Medicine and Neurology by Davidson.
3. Medicine by Golwala.

Section – B [50 hrs] [40 marks]

Neurology + Pediatrics

NEUROLOGY

1. Motor and sensory:- Basic Neurophysiology, functional anatomy, tracts, pyramidal and extra pyramidal/cerebellar systems of brain and spinal cord/nerves

b. Reflexes:- Physiology of reflexes, genesis of spasticity, rigidity, postural reflex

c. Bladder and Bowel Control:- Innervations, anatomy, physiology, pathology

d. Principle of Clinical Examination:- Diagnosis, Differential diagnosis and Prognosis of Neurological disorders, history taking/over view from perspective of clinical examination.

e. Cerebral Palsy:- Etiopathology, clinical features, types, management

f. Stroke:- Etiopathology, clinical features pertaining to artery involved , types, management

g. Neuro-infections: - Meningitis, Encephalitis, Poliomyelitis

h. Movement disorders:- Parkinsonism, Dystonia, Chorea, Tremors And Writer's Cramps, Cerebellar Ataxia, Friedreich's Ataxia

i. Motor Neuron Disease:- classification, clinical features, types, amyotrophic lateral sclerosis

j. Dementia

k. Diseases of Spinal Cord - Non-compressive myelopathies

l. Demyelinating disease:- multiple sclerosis

m. Peripheral Neuropathies : - Diabetic neuropathies, Entrapment neuropathies, AIDP, CIDP

n. Muscle Disorders :– Dystrophies:- (classification clinical features. Beckers muscular dystrophy, duchennes muscular dystrophy), polymyositis, myasthenia gravis, overview of other muscle disorders like channelopathies, cramps. [04 hrs]

PEDIATRICS [15 hrs]

Explain normal process of growth and immunization schedule, importance of breastfeeding, NICU, developmental assessment, birth injuries, nutritional deficiency, genetic anomalies and their management. Describe congenital neuro-muscular, musculo-skeletal, & cardio- pulmonary conditions, infectious diseases, & genetically transmitted conditions.

Practical

Students shall be posted in Neurology units. They shall do clinical checking and ward work to acquaint themselves to neurological and pediatric conditions

Clinical assessment of neurological function to be taught through bedside or demonstration in clinics, of the following:

- Basic history taking to determine whether the brain, spinal cord or peripheral nerve is involved.
- Assessment of higher mental function such as Orientation, Memory, Attention, Speech and Language. Assessment of Cranial nerves.
- Assessment of Motor system.
  Assessment of Sensory function, Touch, Pain and Position.
  Assessment of Tone-Spasticity, Rigidity and Hypotonia.
- Assessment of Cerebral function.
  Assessment of Higher cortical function - Apraxia.
  Assessment of Gait Abnormalities
  Developmental assessment

Book References

Davidson's Principles and Practice of Medicine
Brains Clinical Neurology.
Medicine and Neurology by Golwala.
Surgery by Nan.
Baily & Love's - Short Practice of Surgery.
Essentials of Paediatrics by O.P. Ghai
The development of the infant and Young child by Illingworth

PAPER- II

SURGERY INCLUDING ORTHOPAEDICS

Theory: 100 Hrs Practical: 50 Hrs.

Section A. [50hrs] [40 marks]
*Only theory paper, No university practical examination

I. **General Surgery**

1. Introduction: Description of events frequently accompanying general Anesthesia, Blood transfusion and physiological response of the body.

2. Wounds, scars, ulcers, boils, carbuncles.

3. Principles of pre- and post –operative physical examination, investigations, postoperative complications and their management.

4. Abdominal surgery: Incisions, complications and management of following:
Nephrectomy, Appendicectomy, Herniorrhaphy, Mastectomy, Thyroidectomy, Colostomy, Adrenalectomy, Cystectomy, Hysterectomy, Prostatectomy, Cholecystectomy, llleostomy, Incisional hernia and its prevention.

5. Burns: Causes, Classification, Medical management and precautions in the acute stage, complications of burns and their management.

II .**Plastic Surgery:**

a. Principles of plastic surgery, post – operative management and complications.
b. Cineplasty.
c. Principles of cosmetic surgery.
d. Skin grafting.
e. Surgery of Hand with emphasis on management of traumatic & leprosy hand.
f. Burns and plastic surgery management.

III. Ophthalmology:

Etiology, symptomatology and treatment of visual defects emphasis on Errors of Refraction, Squint, Conjunctivitis, Trachoma, Corneal ulcers, lritis, Cataract, Retinitis, Detachment of retina and Glaucoma (lecture demonstration only)

IV. E.N.T.

Etiology, sysptomatology and treatment of sinusitis, Rhinitis, Acute and Chronic Otitis, Otosclerosis, Mastoidectomy and loss of hearing.

V. Cardiothoracic Surgery

Incisions for cardiothoracic surgery General pre and post operative management of cardiothoracic surgery-various surgical procedure for various chest and cardiac condition/ diseases.

VI. **OBS. and GYN**.

Preganacy – stage of praganacy- Labour – Stages of Labour- Deliver. Common gynecological problems.

Book References

1. Surgery by Nan.
2. Surgery by Baily & Love –
3. Short Practice of Surgery by Rain & Ritelife.
4. Gynaecology and Obstetrics in the Health care of a Woman by Seymoul L. Romney, Mary Jane Gray, J. A. Merrill.
5. Shaw's Textbook of Gynecology.
6. Jeffcoat's Principles of Gynecology.
7. General Surgical Operations by R.M. Kirk and R.C.N. Williamson.

Section B. [50hrs] [40 marks]

ORTHOPAEDICS

*Only theory paper, No university practical examination

1. **Introduction to Orthopedics:** Terminology, types of common etiology, clinical examination, Common investigation, Outline of management – Operative & Non-Operative. Orthopedic conditions
2. **Principles of operative Managements**: Osteotomy, Arthrodesis, Spinal Stabilization, Tendon operations, External fixation, Arthroscopy, total joint replacements, limb re-attachments.
3. **Sprain and Strains:** Common sites of sprains and muscle strains, their clinical manifestations and treatment.
4. **Fractures and Dislocations**: Briefly mention Types of fracture and dislocations, symptoms and signs of above injuries and their Principles of management and Complications.
5. **Prevention and treatment of common complications**: Fracture disease, Volkmans ischaemic contracture, Sudeck's osteo dystrophy, Myositis ossificans, Ligament injuries,Shoulder- hand syndrome etc.
6. **Spinal column**: fractures, management and complications of Spinal injures spinal deformities like Scoliosis, Kyphosis, and Lordsis etc.
7. Injuries of upper limb and lower limb, enumerate major fracture and joint injuries, brief description of principle of management and complications.
8. **Amputations**: Classification, indications, pre-operative, operative and post-operative management.
9. **Arthritis**: Outline of Pathology, clinical features, management, complications of Rheumatoid arthritis, osteo- arthritis and Ankylosing spodylitis.
10. **Bone and Joint infections**: Etiology, clinical feature, management and complications of Septic arthritis, Osteomyelitis, Tuberculosis and leprosy.
11. **Congenital anomalies and other deformities**: C.D.H, CTEV, Scoliosis etc.(Salient features only).
12. **Bone and Joint Tumors**: Classification, clinical features and management of Osteoma, Osteosarcoma, Osteoclastoma, Ewings tumor, Multiple myeloma and Secondaries.
13. **Low backache**: Causes, management.
14. Frozen shoulder and other painful conditions of shoulder, Painful heel conditions, Tendinitis and Fascilis.
15. Poliomyelitis: common deformities due to PPRP and their management.
16. **Miscellaneous condition**: Spondylitis, Prolapse inter-Vertbral disc, Tennis elbow. Carpal tunnel syndrome, Spondylolisthesis etc.

Practical

Students do clinical checking, ward work, hospital posting for a period of one month to acquaint themselves with traumatology and orthopedic conditions.

Book References

- Outline of fracture by Adams.
- Outline of Orthopedics by Adams.
- Orthopedics and Traumatology by Natarajan.
- Aplay's Orthopedics.

PAPER – III

BIO-MECHANICS & KINESIOLOGY

Theory: 100 Hrs. Practical 30 Hrs.

[80 marks]

1) General concepts of biomechanics:

a) Essential terms & concepts in biomechanics: classification of mechanics – static, dynamic, Kinematics, kinetic .

2) Kinetics:

a) Force : Definition

b) Newton's laws of motion with examples and application in O.T

c) Classification of force system – linear, parallel, concurrent, general, composition and resolution of forces with examples. Moment torque & couple.

d) Types of forces- internal, external, gravity- centre of gravity and its application in human body, planes of human body.

e) Levers – classification, physiological significance of trade – off of mechanical advantage

f) Static and dynamic qualibrium with examples.

g) Friction and its practical application in the human body h) Application in occupational therapy.

3) Kinematics: Types of motion – linear / translator, rotatory / angular, curvilinear, general plane motion. Application of kinematics in human body – open & close Kinematics chain motion

4)Biomechanics of upper extremity joints:

Shoulder, elbow, radio-ulnar, wrist, hand with special emphasis on particular

Surfaces, joint capsule, type of joint, muscles and ligaments surrounding the joint, Their action & functions, forces applied, movements occurring, relationship of joints to Other joints.

5) Biomechanics of lower extremity joints With special emphasis on articular surfaces, joint capsule, type of joint, muscles, and ligaments surrounding the joint, their action & functions,, forces applied, movements occurring, relationship of joints to other joints. In addition to following:

a) Hip – Varus & valgus of femoral neck, forces acting during single & double leg stance, factors affecting, effect of use of cane on hip joint forces.

b) Knee & patellar-femoral – Stability & mobility with respect to locking and unlocking of joint. c) Ankle & sub-talar joints – Stability achieved, arches of fool, weight bearing on foot.

6) **Gait :** [10 hrs] Normal human gait cycle (walking), its parameters, myokinetics & kinematics, stair gait, running. Common gait deviations. Types of crutch & cane, crutch & cane gaits. preparatory exercises for crutch cane waking.

7) **Posture :**

Anatomical aspects of posture, factors affecting posture. Normal & abnormal curvatures of spine, exercises for spine.

8) Vicarious movements: types with examples, in various nerve injuries

9) Range of motion testing: Principles in clinical conditions – indications and contraindications, visual observations

10) Muscle strength – individual muscle testing: Principles in clinical conditions.

PRACTICALS:

1) Assessment of joint range of motion of U.E., L.E. & spine on patients
2) Assessment of individual muscle testing in U.E., & L.E.; testing spinal muscles (groups) on patients
3) Demonstration of types of crutch gaits, identification & analysis of pathological gaits.

BOOKS RECOMMENDED

1. Joint Structure and Function – A Comprehensive Analysis by C.C. Norking, P.K. Levangie,
2. Physiology of joint & joint motion by Kapanji I. A.
3. Therapeutic exercise by J. Basmajan
4. Biomechanics of human motion by William Listner
5. Measurement of joint motion : a guide to goniometry by C.C. Norkin & D.J. White
6. Therapeutic exercise – Foundations and Techniques – C. Kisner . L. A. & Colby
7. Muscle testing and function by F.P. Kendall
8. Daniel's & Worthingham's Muscle testing.

PAPER – IV

OCCUPATOINAL THERAPY IN MEDICAL CONDITIONS PART – I

Theory: 100 Hrs. Practical: 120 hrs.

[80 marks]

1. Introduction: Brief review of medical conditions and treatment and role of occupational therapy in the Rehabilitation of paring with various diseases.

2. Therapeutic activities and techniques in Occupational Therapy.

1. Methods of evaluation in Occupational Therapy.
2. Aims and principles of Occupational Therapy.
3. Developmental aspects of childhood.

    a. Physical, emotional intellectual and social development of the child.
    b. Guide for developmental testing
    c. Average developmental achievement.
        i. From birth to 5 years of age.
        ii. From 5 – 10 years of age.

4. Various neuro physiological approaches used for the occupational therapy management of medical conditions including: Roods approach, Neuro developmental approach, Brunnstrom movement therapy, PNF approach, Motor relearning approach

5. Clinical features, Occupational therapy assessment and goal setting for various medical conditions including

1) Reumatiod Arthritis:

Definition, O.T. treatment in R.A., pathomechanics of hand deformities, rehabilitation of R.A. in Acute stage, rehabilitation of R.A. in subacute stage, rehabilitation of R.A. in chronic stage joint protection techniques, work simplification techniques.

2) Gerontology:

Theories of ageing, ageing & disease, death & dying, O.T. treatment in gerontology

3) Dermatology:

Leprosy, O.T. in acute & chronic dermatological conditions with psychosocial implications.

4) HIV: Stages of infection, physical psychological & environmental consideration, O.T. assessment treatment.

5) **Pulmonary conditions:**

Chronic bronchitis, bronchial asthma, emphysema, empyema, COPD, ILD, T.B., lung abscess occupational lung diseases, throcic surgeries, related postural deviations and their corrections. Assessment-auscultation or air entry and secretions. Interpretation of pulmonary function test and their application in rehabilitation.

Therapeutic intervention-Assessment of functional performance capacity to perform occupational activities including work, leisure and self-care.

Assessment of motor performance-functional mobility, strength and endurance.

Activities to improve lung capacity using diaphragmatic and pursed lip breathing patterns. Incorporation of correct breathing patterns in day-to-day living.

Energy conservation techniques and work assessment. Development on pulmonary endurance & physical work capacity Clinical features, Occupational therapy assessment, goal setting & neuro physiological approaches used for various medical conditions including

6) Cardiac conditions

Intervention in acute, convalescent and late phases of cardiac illnesses such as ischaemic heart diseases, acute myocardial infarction, hypertension, cardiac myopathies, congential and acquired heart diseases, valvular diseases, and following interventions like CABG, angioplasties, valve replacements.

Categorization of cardiac patients on the basis of risk factors for exercise prescription. Indications and contra-indications for mobilization, exercise training, work prescription, activity and sports participation.

Prescription of exercise, work and activity based on METS. Exercise dose and mode.

Cardiac conditioning using tredmill, ergo metre, step-apparatus, walking, jogging protocols. Interpretation of signs and symptoms during exercise training and work assessment. Effects of drugs on exercise performance. Modification of exercise, work and activity programmes with respect to residual cardiac function. Assessment on work simulation. Work simplification & energy conservation techniques based on ergonomic principles, their us & application.

7) Cerebral Vascular Accident

8) Cerebral palsy, Mental retardation, Down Syndrome

9) Haematological conditons

O.T. in Haemophilia

10) Obesity.

PRACTICALS

Various techniques of occupational therapy for the above mentioned conditions/diseases should be demonstrated and practiced by the students.

Book References

1) Occupational Therapy – Willard & Spackman's
2) O.T. Practice Skills for Physical Dysfunction – Pedretti
3) O.T. in physical Dysfunction – Tromby & Scott
4) Therapeutic Exercise – Kisner
5) Therapeutic Exercise Basmajian
6) Rehab Medicine – Goodgold
7) Pulmonary rehabilitation, guidelines to success – Hodgkin T.E.
8) Physical rehabilitation, assessment, treatment – O'Sullivan.

PAPER – V

OCCUPATIONAL THERAPY IN SURGICAL CONDITIONS PART – I

Theory : 100 Hrs. Practical : 120 Hrs.
[80 marks]

1. Introduction Brief review of surgical conditions

2. Methods of evaluation, various assessment techniques in occupational therapy for surgical conditions

3. Clinical features, Occupational therapy assessment, goal setting & approaches used for various surgical conditions including

   a) Burns: Definition, classification, stages of burns, O.T. in burns, pre-graft treatment, postgraft treatment, rehabilitation of burns. [10 hrs]

   b) Amputation : Aetiology, surgical management, special consideration & problems, psychological adjustment, levels of amputation, accessories & component part of prosthesis, upper & lower extremity prosthetic training program for upper & lower extremity.

   c) Tendon Injuries: Aetiology, surgical Treatment, O.T. Treatment

1**. Clinical features, Occupational therapy assessment, goal setting & approaches used for various surgical conditions including**

a) Crush injuries of hand, tendon & nerve injuries & their reconstruction, pre & post operative management in O.T. & splinting

b) Cancer rehabilitation: Preventive, restorative, supportive and palliative aspects of radical masectomy, head and neck cancer

c) Vascular Conditions: Peripheral vascular diseases and O.T.

d) 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.

e) Occupational Therapy in deaf, dumb, 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.

2) **Supportive and corrective appliance in the rehabilitation**

3) **Adaptive devices in the rehabilitations of surgical cases**

PRACTICALS

Various techniques of occupational therapy for above mentioned conditions/ diseases should be demonstrated and practiced by students

BOOKS RECOMMENDED

1) Occupational Therapy – Wilard & Spackman
2) O.T. Practice Skills for Physical Dysfunction – Pedretti
3) O.T. in Physical Dysfunction – Scott
4) Therapeutic Exercise – Basmajian
5) Rehab Medicine – Goodgold
6) Rehabilitation of Hand – Wynn & Parry
7) Hand – Hunter
8) Hand splinting – Fees
9) Therapeutic exercise – Kissner
10) Physical rehabilitation, assessment & treatment – Suzan O' Sullivan.

PAPER – VI

APPLIED PSYCHOLOGY INCLUDING PSYCHIATRY

Theory: 100 Hrs. Practical: 50 hrs

Section – A [50 hrs] [40 marks]

APPLIED PSYCHLOGY

A. **Developmental (Child) Psychology**

1. Factors influencing development: Developmental periods - Prenatal Infancy, Babyhood, Childhood, Adolescence; Physical and Motor development; Development of Speech; Emotional and motor Development; Moral Development; Emotional and Social Development, Child's family relationship; Play.....
2. Problems in Emotional development – Nail biting. Lonly behavior, bed wetting, thumb sucking, Aggressive and harmful behavior; relationship of child – parent- Teacher.

B. **Industrial Psychology**

1. Efficiency in production: work – Curve, Factors affecting the work curve; Moral and rewards; way of measuring the effectiveness of psychosocial rewards.
2. Industrial and Highway Accidents : Causes of Accidents – Personal and Environmental ; Accident Prevention.

C. **Experimental Psychology**

1. Quantitative methods in Psycho Physios; Methods for measuring the Absolute threshold and for measuring Differential threshold; the method of Average Error.
2. Analysis of judgments: Expression of judgment verbal reports and inference from non-verbal behavior; Stimulus scales and scales; General Principles of judgments Reliability and validity of judgments
3. Transfer of learning; Types of transfer: Experimental Analysis of transfer, specificity of transfer;
   cross education (Bilateral transfer)

D. **Mental Health and Therapy**

1. Concept of Mental Health, Guidance and learning, parental attitudes affecting guidance – over protection, Rejection, some behavior problems jealousy and sex – problems; Sex education.
2. Treatment of mal-adjustments – Directive and Non- directive therapy, Group Psychotherapy and vocational guidance, Types of Physically handicapped children. Physically handicapped child in a mentally crippled child.

E. **Rehabilitation Psychology**

Interpersonal Relationships, familial and social relationships, acceptance about the disability – its

outcome

in relation to different diagnostic categories; Psychological aspects of multiple handicapped; contribution of
psychology in Total Rehabilitation

Section – B [50 hrs] [40 marks]

PSYCHIATRY

1) Psychiatric history, mental status examination

2) Classification of mental disorders

3) Definition, clinical features, investigation, brief management of psychiatric conditions

Schizophrenic disorders (all types) brief, 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
hypochondriasis, post traumatic stress disorders.
Personality disorders. Substance related disorders.
Adjustment & impulse control disorders
Psycho-sexual disorders.
Psychological factors affecting medical conditions (psychosomatic disorders)
Psychiatric emergencies – suicide
Stress management
Disorders of infancy, childhood & adolescence.
Disruptive behavior disorders, conduct disorder.
Attention deficit & hyperactivity disorder.
Eating disorders, tic disorders elimination disorders.
Affective disorders, child abuse, eneuresis.

4) Treatment : ECT, chemotherapy, group therapy, psychotherapy, cognitive behavioural therapy, behaviour therapy, Stress management.

PRACTICAL (List of Experiments)

I). Learning

a). Serial position effects under massed and distributed practice.

b). Speed of Learning for different amounts of material

C). A study of Learning vision- motor co-ordination (Mirror-Drawing)

d). A study of Habit Formation and Reversal (Card Sorting)

e). Relation of speed and Accuracy.

f). Study of the process of committing to memory non sense material (See –Saw Figures)

II). Psycho-Physics

a). Measuring the differential threshold (Lifted weight)

b). Mapping Coetaneous sense spots.

c). Determining Spatial threshold or Aesthesiometric Index on the back of hand by the method of limits.

III). Attention and Other Fields

a). Influence of set on Attention
b). Span of Attention
c). Muscular work (Ergo graph)
d). Measuring Steadiness.

IV). Intelligence And Personality

a). Measuring Intelligence by Koh's Block Test.

b). Pass- Along test.

c). Performance test-Curve Construction

test.

d). Knox Test Form- Board.

e). Personality test – Introvert – Estrovert.

f). Significance of Social Attitudes (Chi. Square techniques).

V). Demonstration of different categories of disabilities with psychological problems and their management.

Book References

1. Experimental Psychology - Underwood

2. Psychological Testing - Anastasts

3. Abnormal Psychology and modern life - Coleman. J.

4. Readings in Social Psychology - Hartley & New Cany

5. Industrial Psychology - Blum. Naylor Hamper & Row

6. Psychology of Handicap - Rosemery Shakespear

7) Ahuja N. – A short textbook of psychiatry (latest edn.) Jaypee brothers, medical publishers.

8) Shah L.P. : handbook of psychiatry

9) Gandhi & Gandhi – short text book of psychiatry.

Syllabus for Bachelor of Occupational Therapy PART - III

1. The part – III Examination shall consist of the following subjects (Teaching hour approximately for lectures to be delivered and practical classes to be held in each subject indicated against each subject:

S.Nr	Subject	Lectures	Practical
1	Occupational Therapy in Medical condition Part – II	120	100
2	Occupational Therapy in Surgical condition Part – II	120	100
3	Disability Prevention and Rehabilitation including Prosthetics & Orthotics ADL	120	100
4	Bio Statistics and Research Methodology	60	--
5	Occupational Therapy Clinicals	--	800

2. The full marks for each subject and the minimum marks required for passing the part III Examination shall be as follows:

	Subject	Written	Int. Asst.	Min. Marks (Wriint. Asst.	Practical	Int. Asst.	Min. Marks. (Prac.+Inrt. Asst.	Total Marks
1	Occupational Therapy in Medical condition Part – II	80	20	50	80	20	50	200
2	Occupational Therapy in Surgical condition Part – II	80	20	50	80	20	50	200
3	Disability Prevention and Rehabilitation including Prosthetics & Orthnotics ADL	80	20	50	80	20	50	200
4	Bio Statistics and Research Methodology*	--	50	25	--	--	--	50

* no university exam

PAPER – I

OCCUPATIONAL THERAPY IN MEDICAL CONDITIONS PART – II

Theory: 120 hrs Practical: 100 hrs

THEORY

[80 marks]

OCCUPATIONAL THERAPY IN NEUROLOGY & PEDIATRICS

Introduction: Brief Review of nervous system; Principles of occupational therapy management in neurological conditions. Objectives and functions of Occupational Therapy: Occupational therapy assessment in neurological conditions; various frames of reference used in occupational therapy.
A] Clinical features, medical management, occupational therapy assessment, aims, therapeutic techniques & approaches used in the following conditions;

1. Acute infections of nervous system – Encephalitis, meningitis, transverse myelitis neuro- syphilis.
2. Cerebral palsy, Hydrocephalus.
3. Poliomyelitis.
4. Cerebro vascular accidents.
5. Epilepsy.
6. Common affections of peripheral, spinal and cranial nerves, Myopathy.
7. Lesion of Pyramidal, extra pyramidal, cerebellar systems.
8. Motor neuron diseases.
9. Degenerative Neurological conditions, parkinsonism, syringomyelia.
10. Multiple selerosis.

OCCUPATIONAL THERAPY IN PSYCHIATRY

1. Introduction & Brief review of psychiatric conditions.
2. Psychiatric rehabilitation team; objectives of occupational Therapy in Psychiatry.
3. History development of psychiatric occupational therapy
4. Different methods of evaluations in psychiatry; occupational therapy assessment used in psychiatric conditions.
5. Role of activities in psychiatric treatment
6. Define and describe the following approaches & techniques in evaluation & treatment of psychiatric conditions:
   Cognitive behaviour approach, behaviour modification approach, occupational behaviour approach [MOHO], psychoanalytical approach, sensory integrative approach, developmental group approach, Therapeutic use of self, projective techniques, group therapy, attitude therapy, music therapy, supportive groups & vocational therapy.

IV. Occupational Therapy assessment, treatment aims, plans & methods of treatment for the following conditions: [20hrs]

i) Psychosis: Schizophrenia, Mania, Depression
ii) Neurosis: Neurotic depression, anxiety, hysteria, obsessive compulsive neurosis, phobia
iii) Alcoholism and drug addiction
iv) Childhood and geriatric mental health problems

V. Occupational Therapy as an adjunct to

1. Chemo therapy
2. Insulin Therapy
3. E.C.T.
4. Psycho therapy

PRACTICALS

Various techniques of occupational therapy for the above mentioned conditions/ diseases should be demonstrated and practiced by students.

CLINICAL PRACTICE

Students should undergo compulsory rotatory clinical postings on neurological, medical, pediatric and psychiatric IPD & OPD throughout the year.

Evaluation, functional diagnosis and treatment planning/ future planning: documentation of minimum 10 cases from above mentioned topics.

BOOK REFERENCES

Occupational therapy in Neurology & Pediatrics

1. Occupational Therapy practice skills for physical dysfunction by L. Pedretti, B. Zoltan
2. Occupational Therapy for Physical Dysfunction by C.A.Trombly
3. Occupational Therapy and Physical Dysfunction: Principles, Skills and Practice by A. Turner
4. Willard and Spackman's Occupational Therapy
5. Neurological Rehabilitation- A. U. Darcy
6. Occupational Therapy for children : J. CaseSmith and A Pratt
7.Introduction to occupational therapy and occupational therapy marketing by M Karthik
7. Occupational Therapy in Short Term Psychiatry by M. Wilson.
8. Occupational Therapy in Long Term Psychiatry by M. Wilson.
9. Quick reference to Occupational Therapy by K. Reed.
10. Occupational therapy and Mental Health by J. Creek.

PAPER – II

OCCUPATIONAL THERAPY IN SURGICAL CONDITIONS PART – II

Theory: 120 hrs Practical: 100 hrs

[80 marks]

1. Introduction: Brief Review of Orthopedic conditions, clinical evaluation and treatment.

2. Methods of Evaluation in occupational therapy

3. Occupational Therapy techniques as remedial measures.

4. Objective and functions of occupational therapy in
   a) Congenital orthopaedic conditions and O.T. Management
   b) O.T. for fractures of upper and lower limbs, management of complications, internal fixation, external fixation, excision and replacement arthroplasty.
   c) Occupational Therapy management including PNF techniques for Erb's Palsy, brachial plexus palsy and peripheral nerve injuries. Introduction to sports medicine.

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 Poliomyelitis and cerebral palsy. Reconstructive surgeries including limb lengthening procedures and orthotic mangement.

8 Arthritis, Surgical and rehabilitation programme.

9 Pain management in Occupational Therapy.

10 Cumulative trauma disorders and application of ergonomic principles in management of such conditions

11Metabolic disease of bone Rickets, Osteomalacia, Osteoporosis, gout, and O.T. Managemen

CLINICAL:

Students should undergo compulsory rotatory clinical postings on orthopedic and burns unit IPD & OPD throughout the year.

Evaluation, functional diagnosis and treatment planning/ future planning: documentation of minimum 10 cases from above mentioned topics.

BOOKS RECOMMENDED :

1. Occupational Therapy practice skills for physical dysfunction – L. Pedretti, B Zoltan.
2. Occupational Therapy for Physical Dysfunctions – C. Trombly,
3. Occupational Therapy and Physical Dysfunctions – Principles, Skills and Practice – Ann Turner
4. Therapeutic exercise – Foundations and Techniques – Kisner
5. Therapeutic Exercise – J. Basmajiian –(Latest Ed.)
6. Willard and Spackman's Occupational Therapy –
7. Rehabilitation of the Hand by Wynnparry CB Published by Butterworths
8. Orthopaedic Physical Assessment – David Magee Published By WB Saunders
9. Introduction to Occupational Therapy and Occupational Therapy Marketing by M Karthik
10. Clinical Orthopaedic Rehabilitation – Brent Brotzman Published by Mosby

PAPER – III

DISABILITY PREVENTION AND REHABILITATION INCLUDING PROSTHETICS , ORTHOTICS &ADL

Theory: 120 hrs Practical: 100 hrs

[80 marks]

1. Introduction to disability, impairment, handicap& health
2. Definition and phases of disability process.
3. Definition concerned with causes of impairment, functional limitation, and disability.

4. Rehabilitation and disability prevention.
5. Present rehabilitation services.
6. Reservation & Legislation for rehabilitation services for the disabled.
7. Community based Rehabilitation.
8. Basic principles of Organization, Administration, Budget, management approach, personnel and space management
9. Rural rehabilitation incorporated with Primary Health Centers.
10. Principal of Communication: Impairment
    - i). Speech Production.
    - ii). Communication disorders secondary to Brain Damage.
    - iii). Aphasia and its treatment.
    - iv). Evaluating language.
    - v). Non-aphasic language disorders.
    - vi) Dysarthria and its treatments

11. Ethics for the professionals.
12. Social rehabilitation
    1. Principles in management of Social Problems
    2. Social needs of the patients
    3. Social workers role in rehabilitation team
13. Vocational Rehabilitation
    1. Principles in Management of vocational problems.
    2. Vocational Evaluation. Job Analysis
    3. Vocational Goals for the severely disabled.

14. Prosthetics & Orthotics

i). Definition & Basic Principles.

ii). Designing and construction of orthosis:

a. Upper extremity orthosis
b. Lower extremity orthosis
c. Spinal orthosis.

iii). Upper extremity and lower extremity prosthesis prescription, fitting and checking.

iv). Prescription and design of footwear & modifications.

v). Wheel Chairs.

15. ADL : Different types of ADL, Grading, and Training methods

BOOK REFERENCES

1. Rehabilitation - Evans
2. Directory for disabled people -
3. Improving residential life for disabled people - Tully
4. Physical Medicine & Rehabilitation - Okawata
5. Community diagnosis and health action - Bennetch
6. Hand book of Physical Medicine & Rehabilitation – Rusk
7. Introduction to Occupational Therapy and Occupational Therapy Marketing by M Karthik

PAPER - IV

BIO STATISTICS & RESEARCH METHODOLOGY

Total hours : 60 hrs. [Internal exams only]

COURSE CONTENTS

1. Review of literature
2. Study design
3. Sample size
4. Sampling variability & significance
5. Protocol writing
6. Ethical aspects
7. Data collection & presentation
8. Common statistical terms
9. Measures of location, average & percentiles
10. Variability & its measures
11. Normal distribution & normal curve
12. Probability
13. Significance of difference in mean
14. Chi- Square test
15. Correlation & regression
16. Demography & vital statistics
17. Correlation of measures of population & vital statistics.
18. Referencing Methods
19. Type of Research
20. Application of research methodology and statistics in Occupational therapy

BOOKS RECOMMENDED

A practical approach to PG dissertation- R. Raveendran & B. Gitanjali
Research Methods for Therapist - Hicks Carolyn
Methods in Biostatistics – Mahajan
Occupational Therapy – Willard and Spacksman

Syllabus for Bachelor of Occupational Therapy Part – IV

Part – IV Examination shall consist of the following subjects (teaching hour approximately for lectures to be delivered and practical classes to be held in each subject indicated against each subject).

S.No	Subject	Lectures	Practical
1	Community Medicine	75	-
2	Rehabilitation Medicine	120	50
3	Alternative Medicine	50	50
4	Physical Diagnosis	120	50
5	Ethics & management Study	60	-
6	Seminars & Discussions	50	-
7	Occupational Therapy Clinicals	-	960

2. The full marks for each subject and the minimum marks required for passing the same shall be as follows: -

No	Subject	Written	Int. Asst.	Min.Marks (Writ+ Int.Asst)	Practical	Int. Asst.	Min.Marks (Prac.+Int. Asst.	Total Marks
1	Community Medicine	80	20	50	-	-	-	100
2	Rehabilitation Medicine	80	20	50	80	20	50	200
3	Alternative Medicine	80	20	50	80	20	50	200
4	Physical Diagnosis	80	20	50	80	20	50	200
5	Ethics and management studies	80	20	50	-	-	-	100
6	Seminars & Discussions	50	-	-	-	-	-	50
7	Clinicals	50 (Based on regular attendance and clinical performance)						50

PAPER - I

COMMUNITY MEDICINE

Theory: 60 hrs Demonstration: 15 hrs
[80 marks]

COURSE DESCRIPTION

This course enables the student to understand the effects of the environment and the community dynamics on the health of the individual with special emphasis on disability limitation specific protection and rehabilitation.

COURSE OBJECTIVE

The objective of this course is that after 60 hours of lectures and 15 hours of demonstrations, practical, clinics and filed visits, the student will be able to demonstrate and understanding of the influence of social and environmental factors on the health of the individual and society. In addition, the student will be able to fulfill with 75% accuracy (as measured by written, oral and practical evaluation), the following objectives of the course.

COURSE OUTLINE Each topic 1 Hrs. [80 marks]

1. Concept of Health
2. Concept of Disease
3. Natural History of disease
4. Role of Socio-economic environment in health & disease
5. General epidemiology
6. Basic concept of morbidity / mortality rates
7. Period age cause of specific death rate
8. Role of indicators in health & disease
9. Role of epidemiological investigation in public health
10. Primary health care
11. National health care delivery system
12. ARI control program
13. Diarrhea disease control program
14. National AIDS control program
15. RNTCP
16. National leprosy elimination program
17. National blindness control program
18. Universal immunization program
19. ANC/PNC
20. Perinatal mortality & maternal mortality
21. IMR/ under 5 mortality rate
22. Occupational health methods of prevention of occupational disease & hazards
23. Social security (factories act / workers compensation benefit)
24. E.S.I.S. & its benefits
25. Contraceptive methods – II
26. Contraceptive methods – II
27. Concept of family planning – objective strategy of family planning program
28. Mental health- community aspects
29. Role of occupational therapy in mental health problem
30. Accident

31. Malaria
32. Filaria
33. Tuberculosis – I
34. Tuberculosis – II
35. Polio
36. Leprosy
37. Tetanus
38. Meningitis
39. Viral encephalitis
40. NCD – Chronic diseases & CHD
41. Hypertension
42. Diabetes mellitus
43. Stroke
44. Cancer
45. Rheumatic heart diseases
46. Blindness
47. National NGO's
48. International health agencies
49. Concept of perception / attitude / socialization
50. Learning & theories of learning
51. Social changes & change process
52. Motivation needs & drives
53. Principles & process of communication
54. Types & barriers of communication
55. Approach to health education & contents of health education
56. Principle & practice of health education
57. Critical evaluation of theories/tool/heart education
58. Role of health personnel in health education
59. Health education national health program
60. Elements of planning in health education programs

Book Reference

1. Textbook of Preventive and Social Medicine by Dr J E Park.

PAPER - II

REHABILITATION MEDICINE

Theory: 120 hrs Practical: 50 hrs

[80 marks]

COURSE DESCRIPTION

Following the basic science and clinical science courses, this course will enable the students to understand their role in the management of the disability within the rehabilitation team.

COURSE OBJECTIVES

The objectives of this course is that after 170 hours of lectures and instructions, in addition to clinics, the student will be able to demonstrate an understanding of-

A. The concept of team approach in rehabilitation will be discussed and implemented, through practical demonstration with contributions from all members of the team.

B. Observation and identification of diagnostic features in Physical conditions will be practiced through clinical demonstration

C. Medical and surgical aspects of disabling conditions will be explained in relation to rehabilitation.

D. Identification of residual potentials in patients with partial or total disability (temporary or permanent)

E. Formulation of appropriate goals (long & short term) in treatment & rehabilitation will be discussed.

COURSE OUTLINE

A. Introduction
- i) Definition of the term rehabilitation & its aims and principles.
- ii) Scope of rehabilitation
- iii) Concept of rehabilitation team and their responsibilities.

B. Evaluation of Dysfunction & Rehabilitation

Demonstrate methods of evaluation for dysfunction and rehabilitation management of disabilities with particular reference to:

- i)Spinal cord injury (paraplegia and tetraplegia)
- ii)Poliomyelitis
- iii) Head injury
- iv) Stroke
- v) Cerebral palsy
- vi) Arthritic conditions
- vii) Muscular Dystrophy
- viii) Hansen's disease
- ix) Peripheral nerve lesions
- x) Cardio-respiratory dysfunction

C. Introduction to human sexuality in relation to disability management in occupational therapy, models of intervention in sexual problems.

D. Outline of Speech Therapy and Hearing Aids.

i) Types of speech difficulties; Significance of Speech Training
ii) Types of hearing problems; different hearing aids

E. Outline of social and vocational counseling.

i) Concept of socialization, social needs of the disabled, social counseling
ii) Vocational difficulties in disabled; vocational guidance

F. Principle of Bio-engineering and applied rehabilitation.

i) Hand splints – Prescription; methods of design and fabrication
ii) Orthosis & Prosthesis Checkout & functional Training

Anatomy, bio mechanics, acquired and congenital conditions, special tests, dysfunctions and rehabilitation management of conditions on the following joints;

G. Rehabilitation of the shoulder

H. Rehabilitation of the Elbow.

I. Rehabilitation of the Wrist & hand

J. Rehabilitation of the Hip

K. Rehabilitation of the Knee

L. Rehabilitation of the ankle

M. Rehabilitation of the spine

REFERENCE BOOKS

1. Hunter, Mackin, Callahan's Rehabilitation of the Hand and Upper Extremity by Evelyn Mackin, Anne D. Callahan. Published by MosbyZoltan.
2. Occupational Therapy for Physical Dysfunctions – C. Trombly,
3. Occupational Therapy and Physical Dysfunctions – Principles, Skills and Practice – Ann Turner
4. Hand book of Physical Medicine & Rehabilitation – Rusk
5. Rehabilitation medicine by Sunder
6. Willard and Spackman's Occupational Therapy by Elizabeth BlesedellCrepeau, Ellen S. Cohn, Barbara A. Boyt Schell. Published by Lippincott Williams & Wilkins
7. Rehabilitation of the Hand by Wynnparry CB Published by Butterworths
8. Orthopaedic Physical Assessment – David Magee Published By WB Saunders
9. Clinical Orthopaedic Rehabilitation – Brent Brotzman Published by Mosby
10. Rehabilitation Medicine by Joseph Goodgold. Published by The C.V. Mosby Company
11. Neurological Rehabilitation by Darcy A. Umphred. Published by Mosby

PAPER - III

ALTERNATIVE MEDICINE

Theory – 50 hrs [80 marks]

The objective of the course is to make the student or the occupational therapist to get aware with the various branches of the alternative medicines, which he/she may use, for efficiently rehabilitating the individual.

COURSE CONTENT

1. Yoga as adjunct to Occupational Therapy

2. Principles and physiological effects of Yogic postures and breathing practices in Yoga. Basic postures of Yogasana and Pranayam . Clinical applications, indications contra indications and precautions in yogic exercise prescriptions. Relaxation, medication practices in yoga, therapeutic applications in OT.

2. Biofeedback

Definition of biofeedback. Principles, foundations and elements of biofeedback system. Neurophysiological clinical reasoning in biofeedback system. Types of biofeedback system and clinical applications with advantages of biofeedback system as an adjunct to Occupational Therapy.

3. Stress Management

Definitions, types and physiology of stress. Stress factors, stress response and techniques in stress management.

4. Physical Agent Modalities.

Principles and regulatory guidelines for the use of physical agent modalities. Introduction, clinical application, precautions and contraindications of various physical agents such as thermal modalities, electrotherapy and therapeutic ultrasound and laser therapy.

3. Holistic Approaches

Definition, History, Principles, Concepts, Therapeutic Effects, indication, contraindication and its

Related application with Occupational Therapy; Pranic healing, Reiky Therapy, Acupressure & Acupuncture Therapy, hypnotherapy, Naturopathy .

5. Other allied therapies related to alternative medicines

Concept of alternative medicine, & other alternative therapies; adjunct to occupational therapy Including Myofacial release, therapeutic massage, hydrotherapy.

REFERENCE BOOKS

1.Willard and Spackman's Occupational Therapy by Elizabeth BlesedellCrepeau, Ellen S. Cohn, Barbara A. Boyt Schell. Published by Lippincott Williams & Wilkins

2.Occupational Therapy - Practice Skills for Physical Dysfunction by Lorraine Williams Pedretti. Published by Mosby

3. Occupational Therapy for Physical Dysfunction by Catherine A. Trombly, Mary Vining Radomski. Published by Lippincott Williams & Wilkins

4.Therapeutic Exercise by John V. Basmajian& Steven L. Wolf. Published by Williams & Wilkins

5. Krusen's Handbook of Physical Medicine& Rehabilitation by Frederick J. Kottke, Justus F. Lehmann. Published by W. B. Saunders

6.Rehabilitation Medicine, Principles & Practice by Joel A. DeLisa, Bruce M. Gans. Published by Lippincott Williams & Wilkins

7.Biofeedback: Principles & Practice for Clinicians by John V. Basmajian. Published by Williams & Wilkins

8. Yogic Exercises, physiologic and psychic processes by S. Dutta Ray. Published by Jaypee Brothers

9. Occupational Therapy and Mental Health by Jennifer Creek. Published by Churchill Livingstone

10.. Neurological Rehabilitation by Darcy A. Umphred. Published by Mosby

11.Physical Agent Modalities: Theory and Application for the Occupational Therapist by Alfred G.

Bracciano. Published by Thorofare NJ SLACK Inc

PAPER - IV

PHYSICAL DIAGNOSIS

Theory : 120 hrs
[80 marks] Practical: 50 hrs

This course serves to integrate the knowledge gained by the student in basic and clinical medical science with the skills gained by Basic Occupational Subjects thus enabling them to apply these in Evaluation of functions and measurements in General and in Clinical situations of dysfunctions of different system.

COURSE OBJECTIVE

The objective of this course is that after 170 hours of lectures, Demonstrations, Practical and clinics, the student will be able to acquire concept of Evaluation of functions and measurement in general and in disorders of different systems. Thus physical abnormality can be identified and measured by the students to facilitate Occupational Therapy management program.

COURSE CONTENT

A. Introduction

Process of diagnosis; Differential diagnosis; clinical decision making process

B. General Consideration

Clinical Reasoning; Assessment of performance areas, Performance components & performance context; standard and non standard occupational therapy assessment scales & tools

C. Physical Diagnosis of cardio respiratory system.

Review of cardio respiratory anatomy and physiology.

Clinical features, Investigations, differential diagnosis, standard and non-standard occupational therapy assessment scales & tools for cardio respiratory conditions including

i) Asthma, COPD, bronchitis, emphysema, pneumonia, tuberculosis & occupational lung disease
ii) Coronary heart disease, Cardiomyopathy, cardiovascular disease, Ishaemic heart disease, Heart failure, Hypertensive heart disease, Inflammatory heart disease, Valvular heart disease.

D. Physical Diagnosis of Nervous system

Review of nervous system anatomy & physiology.

Clinical features, Investigations, differential diagnosis, standard and non-standard occupational therapy assessment scales & tools for neurological conditions including

i) Stroke, Cerebral palsy, parkinsonism, cerebellar dysfunctions, epilepsy, motor neuron disease, multiple sclerosis, neuropathies & acute infections of nervous systems

E. Physical Diagnosis of Musculo skeletal system.

Review of musculo skeletal system anatomy & physiology.
Clinical features, Investigations, differential diagnosis, standard and non-standard occupational therapy assessment scales & tools for orthopedic conditions including

Fractures and dislocations of upper & lower limb; Spinal deformities; inflammatory conditions of joints; degenerative conditions; nerve injuries & low back pain;

F. Physical Diagnosis of disability

Disability evaluation principles, guidelines for disability certificates; guidelines for the evaluation of permanent physical & mental impairment

G. Functional Evaluation

i) Purpose, general consideration, various functional assessment instruments;

ii) Standard & non standard assessment scales & tools for environment assessment, assistive technology assessment, wheel chair assessment, driving evaluation, activities of daily living assessment, play & leisure assessment

H. Occupational Evaluation.

Job evaluation & analysis, standard work assessment tools, work hardening, work conditioning, work station & ergonomics.

PAPER - V

ETHICS AND MANAGEMENT STUDIES

Theory: 60 hours [80 marks]

COURSE DESCRIPTION

After 60 hours of lecture, students should be able to understand the ethical principles of occupational therapy profession& need for development of the profession. To be able to understand principles of management in personal management, time management and administration including budgeting

COURSE CONTENT

1. Professional Ethics and legal issues

i. Professional Ethics: Indian & International ethics for occupational therapist
ii. Medico legal issues; consumer protection act; legal responsibilities of professionals.

iii. Current social and medical policy in the provision of health care; persons with disability act; mental health act; national trust for the welfare of persons with autism, cerebral palsy, mental retardation and multiple disabilities ACT.
iv. National and international occupational therapy statutory bodies & professionals association (AIOTA & WFOT): Difference between association & council.
v. Professional developmental activities
vi. The role of international health agencies such as WHO and WCPT.

2. Management studies for Occupational Therapy

i. Definition – Branches of management – Principles health sector management - Theories management.
ii. Personnel management – Policies and procedure, Basic concepts and theories.
iii. Financial issues including budget and income generation.
iv. Organization & administration: Principles of an organization & administration.
v. Organization of a department – Planning, space, manpower materials resources management, leadership, problem solving, marketing, quality management, communications.
vi. NGO: role of NGO's in health care sector.
vii. Self Management –
    a. Preparing for Ist Job
    b. Time Management
    c. Career development activities
    d. Private practice

3. Computer application in Occupation Therapy:

Technology; assistive & computer technology application in OT Use of computer as a tool in clinical implementation Software selection criteria & methods .

Method of clinical implementation in motor, sensory, cognition, ADL, affective domain

SEMINARS & DISCUSSIONS

Students will be made to present seminars on various topics as given by the concerned lecturers. On the basis of their performance, the students will be evaluated out of 50 marks which will be considered for their final examination as gross internal assessment.

CLINICALS (Clinical Postings)

Compulsory rotatory clinical postings will be allotted in the various departments of the hospital on daily basis. Based on attendance, performance and successful completion of assignments the internal assessment will be done and students will be evaluated out of 50 marks which will be considered for their final examination as gross internal assessment.

RECOMMENDED TEACHING STAFF

This will be full time teaches

1. Principal of Professor – Master Degree in Occupational therapy or Physiotherapy or M. Sc. Occupational therapy/Physiotherapy with 5 years experience. Or Senior Occupational therapist with equivalent BOT degree and experience of at least 20 years.
2. The teacher and student ratio will be 1:10 and minimum 5 to 7 teachers for intake of 25 students and 8 to 10 teachers for 69 students. Preferably full time; Otherwise 50% part time/contractual.
3. The teaching staff will consist of Asst. Professor – preferably with master's Degree in Occupational Therapy with 3 years experience and Tutor in Occupational Therapy with B.O.T. Degree. Ratio between Asst. Professor and Tutor will be 4:6.
4. One Lecturer / Asst. Professor with M.D. or M.S. Degree in each Medical Subject .
5. The teachers in allied subjects like Biostatics etc can be part time or visiting.

PHYSICAL FACILITIES

A. Building Facilities: There must be adequate arrangement for the class rooms for all the batches with good ventilationi and lighting. There must be sufficient space in the classrooms, so that there is no over crowding. Each student must have a space of s2.5' x 2. 5 for his seat i.e. to accommodate 50 students the size of the classroom should not be less than 1500 – 2000 sq. ft.

	TYPE OF FACILITY	RECOMMENDED SPACE	NO.
1	Anatomy & Physiology Museum	20' x 40'	1
2	Demonstrator room for Occupational Therapy	20' x 20'	1
3	Cognition Perception Therapy Unit	20' x 20'	1
4	ADL training Unit	20' x 20'	1
5	Vocational Training Unit	20' x 20'	1

6	NDT, Sensory Integration therapy Unit	20’ x 20’	2
7	Paediatric Unit, Adult unit and Psychiatric unit	20’ x 20’	3
8	Hand Therapy & Splinting Unit	20’ x 20’	2

LABORATORY FACILITY

a. Physiology (Experimental Physiology & Hematology
b. Anatomy (Museum martury and desecion Hall
c. Pathology (Microbiology and Pathology Practical)
d. Fully Equipped Occupational therapy department (as per list given)
e. Pharmacology & Biochemistry (Practical)

HOSPITAL FACILITIES: The applicant institute should have

A. Hospital run by the proper institute as per paramedical council rules regulation

GENERAL RULES AND REGULATIONS FOR BACHELOR OF OCCUPATIONAL THERAPY COURSE

1. The course of Bachelor of Occupational Therapy is of four and a half years duration including 6 months of compulsory internship.
2. On successful completion of the course. the candidates will be awarded the Degree of B.O.T. (Bachelor of Occupational Therapy)
3. A candidate seeking admission to BOT course must have passed H.S.C. (10+2) or equivalent examination from a Recognized Board/ University with either of the following group of subjects.

4. SELECTION PROCEDURE

1. The application for admission shall be made in the prescribed format of the concerned college only.
2. The application must be supported by necessary documents regarding proof of having passed qualifying examination. Data of Birth / Domicile SC/ST/OBC category etc./ as per the requirements specified in the information Brochure of the concerned college.
3. The college shall make public notification of the Admission notice in the leading news- papers giving all necessary details including date from which the admission forms shall be available and the closing date for issue and receipt of admission forms, minimum qualifications etc. The concerned college shall also put a notice on the Notice board of the college shall also put a notice on the Notice board of the college regarding this.
4. The process of Admission shall be completed before the commencement of the new academic session as per paramedical common healable.
5. The admission shall be made through merit and counseling
6. Division of seats into various categories shall be subject to statutory provisions and the same shall be displayed on the notice board of the college where the counseling is taking place.
7. To qualify a candidate must have at least 50% qualifying marks in PCB .
8. Explanation: Qualifying marks means the marks obtained for the purpose of preparation of merit list.
9. Age Limit : No candidate shall be admitted to this course unless he/she has completed or will complete the age of 17 years on or before 31st July of the year of admission.

10. Distribution of the seats shall be as per the statutory provision and the concerned college shall notify such distribution in the admission notice under intimation to the university.
11. Reserved seat in case remaining vacant for want of suitable and qualified candidate can be filled by general category candidate from the waiting list.
12. Students who do not join the course in time are liable to be refused admission in case of delay in joining due to any reasons. a communication must be sent to the Officer the Charge of the Institute and prior permission from him must be obtained.
13. Students are required to attend all the lectures cracticals and test etc conducted during the academic session. A student is required to attend a minimum of 75% in Theory and 80% in practical of the scheduled classes for this purpose attendance in theory and practical classes will he counted separately.
    i. The dean of the college may condone the snortage of attendances up to 5% only on a valid ground.
    ii. The students failing to fulfill the required attendance for the full period of one academy session (Theory and practical) will not be eligible to appear in annual examination in Theory & Practical.

14. All fees and privilege sill be forfeited if a student is dismissed for based conduct or any other reason or if he/she leas the course during the course of B.P.T. in that case the student will have to pay the fee for further remaining period of course The rights are reserved with the Dean of the College to relax in charging fee for remaining period only up to 50% of the total remaining Fees.

15. The need of the institution reserves the right to remove the roil. If he/she fails to deposit college fees in time the Students will have to deposit the in every year if the stu8dendtsd fails to deposit the college fee in the scheduled time in the case the college will be entitled to charge late fee from the students @ Rs. 10/- per day The dean of the college reserves the rights to candon the delay only on a valid ground of delay.

16. Medical Fitness: Medical fitness certificate should be furnished at the time of admission from recognized medical practitioner approved by the state council.

17. Cancellation of Admission if it is found that a candidate has succeeded in getting admission in the institution in the basis of false or incorrect information or by hiding relevant facts or if at any time after admission it is found that the admission was given to the candidate due to some mistaken or oversight the admission granted to such candidate shall be liable for cancellation forthwith w23ithout any notice at any time during the course of his/her studies by the Head of institution. In case of disputes of doubts concernding admission etc., decision of the Head of Institution shall be final and binding .

18. Admission shall be given to resident of Madhya Pradesh only, if the seats remain vacant, then admission to the candidates of other State s shall be final and binding.

(N.B. This clause is not applicable to N.R.I/ Payment / MGT Seats)

19. Any students taking part in any kind of anti social activities taking part in any kind of hooliganism either inside or outside the institute premises unauthorized absence for attending classes taking part in any unacademic activities ragging etc., will be liable for rustication/ expulsion.

20. The Head of the Institution reserves the right to refuse admission/registration at his own discretion to any students in the beginning of any academic semester for reason of his/her behaving in a manner subversive to discipline or for any grave misconduct.

21. All students should check the percentage of their attendance from time to time and parents/guardians also should keep a watch with regard to the percentage of attendance of their son/daughter/ ward and progress in studies.

22. Modification to Rules/Procedures: The institution reserve the right to amend any rule/procedure for admission to the course and any modification so made shall be binding on all candidates. Under intimation to and with the consent of the University.

23. a) Fee structure shall be fixed by the parmedical council the university and the same must be contained in the information brochure which is to be supplied with the admission form.