SHREE SWAMINARAYAN PHYSIOTHERAPY COLLEGE, KALOL

PROPOSED SYLLABUS
2nd Year B. Physiotherapy

Faculty of Physiotherapy

Degree of Bachelor of Physiotherapy

ESTD 2022

SWAMINARAYAN UNIVERSITY

सर्व विद्या अधिपतये

SWAMINARAYAN UNIVERSITY

THE RESERVOIR OF ALL KNOWLEDGE

SWAMINARAYAN UNIVERSITY
AHMEDABAD – MEHSANA HIGHWAY, AT & PO – SAIJ,
TAL. – KALOL,
DIST. – GANDHINAGAR - 382725

Program Outcomes (POs)

1. Do independent physiotherapy assessment and treatment for patient/client.

2. Work in conjunction with a multidisciplinary team to diagnose and treat movement dysfunctions as per red and yellow flags.

3. Develop skills for physical & functional diagnosis, treatment planning, management, and administration of physiotherapy treatment for patient support.

4. Find employment opportunities in Hospitals/Nursing homes/Sports Teams/Fitness Centers /Community Rehabilitation centers/Health planning boards/Health promotions services/Special Schools/Education Institutes/Industrial Sectors in both private and public sectors as well as in independent physiotherapy clinics.

5. Shall be able to pursue further qualifications to attain a senior position in the professional field and to keep abreast with the recent advances and new technology.

6. Ability to communicate effectively and flexibly in a manner that is appropriate for the patients and other healthcare professionals.

7. Acquaint with the basics of research, and involved in the research process.

8. Apply ethical principles and commit to professional ethics and responsibilities and norms of the Physiotherapy practice as provided by national and state councils.

Program Educational Objectives (PEOs)

PEO 1: Professional Foundation and Application
Graduates will acquire and apply fundamental knowledge of basic medical sciences and physiotherapy principles to assess, diagnose, and manage functional disorders effectively across clinical, community, and institutional settings.

PEO 2: Clinical Decision-Making and Problem-Solving
Graduates will demonstrate clinical reasoning and problem-solving abilities to analyze patient conditions, evaluate treatment outcomes, and adapt physiotherapy interventions based on individual needs and current best practices.

PEO 3: Innovation, Research, and Lifelong Learning
Graduates will engage in evidence-based research, contribute to innovations in physiotherapy practice, and pursue higher education or specialization to remain updated with advancements in healthcare.

PEO 4: Social Responsibility and Ethical Practice
Graduates will uphold ethical values, communicate effectively, and contribute to society by participating in community health, national wellness initiatives, and collaborative interprofessional care, aligned with national and global health goals.

Program Specific Outcomes (PSOs)

PSO1: Clinical Assessment & Diagnostic Reasoning

Graduates will be able to perform comprehensive physiotherapy assessment across musculoskeletal, neurological, cardiopulmonary, pediatric, geriatric, and sports conditions and apply clinical reasoning to arrive at physiotherapy diagnoses.

PSO2: Evidence-Based Physiotherapy Practice

Graduates will integrate research evidence, clinical guidelines and professional expertise to plan and implement safe, effective and contemporary therapeutic intervention

- **Course Credit Structure**

S. No	Year	Course Code	Course Name	L	T	P	Credit	ESE Max	Practical/ Viva Max	IA Max	CSE Max	Total Mark
Year-2												
1	2nd	BPT0201	Pathology	2	-	-	4	40	-	10	-	50
2	2nd	BPT0201	Microbiology	2	-	-	4	40	-	10	-	50
3	2nd	BPT0202	Pharmacology	2	-	-	4	40	-	10	-	50
4	2nd	BPT0202	Psychiatry	1	-	-	2	40	-	10	-	50
5	2nd	BPT0203	Exercise Therapy II	4	-	4	12	80	80	20	20	200
6	2nd	BPT0204	Kinesiology	2.5	-	-	5	40	-	10	-	50
7	2nd	BPT0205	Electrotherapy	4	-	4	12	80	80	20	20	200
8	2nd	BPT0206 BPT0207 BPT0208	Radiology ENT Ophthalmology	0.5	-	-	1	-	-	-	-	-
9	2nd	BPT0209	Allied Therapeutics	0.5	-	-	1	-	-	-	-	-
10	2nd	BPT0210 BPT0211	Professional Practice and Ethics Introduction to Evidence Based Practice	0.5	-	-	1	-	-	-	-	-
11	2nd	BPT02001	Supervised Clinical Practice	-	-	12	12	-	-	-	-	-
			Total - 11				**58**	**360**	**160**	**90**	**40**	**650**

SECOND YEAR B. PHYSIOTHERAPY

1. PATHOLOGY

Prerequisite: Basic understanding of human anatomy, physiology, and cell biology.

COURSE OBJECTIVE:

1. To enable students to understand the pathological alterations that occur in the human body as a result of various medical conditions.
2. To provide comprehensive knowledge about the infectious agents responsible for diseases affecting the central nervous system (CNS), cardiovascular system (CVS), musculoskeletal (MSK), and respiratory systems.

Teaching Scheme:

Teaching Scheme	L	T	P	Contact Hours	Credit	**ESE Max**	**Practical/ Viva Max**	**IA Max**	**CSE Max**	**Total Mark**
	2	0	0	2	4	40	-	10	-	50

SYLLABUS:-

Sr. No.	Topic	Hour	Weightage (%)
1	**General Pathology:** a. Introduction: Aims and objects of study of pathology, definitions of health, disease, causes of disease, methods of study of disease. b. Inflammation–General morphology, types, phenomenon of acute inflammation. c. Tissue repair–Wound healing, fracture, skin, nerves, muscles d. Cell Injury–Degeneration, physical and chemical irritants, ionizing radiations, cellulites. e. Disturbance of circulation – edema, thrombosis, infarction, embolism. f. Necrosis, Gangrene g. Growth and its disorders– atrophy and hypertrophy (pseudo), h. Hyperplasia i. Cellular ageing j. Tumors–definitions, classification, characteristics of being and malignant tumors, etiology and spread of tumors, systemic effects. k. Infection– Acute, chronic, including AIDS. l. Blood-Anemia, definition, classification, etiology, lab investigations ,blood picture; Hemorrhagic disorders–causes and classification (hemophilia)	**33**	**43%**

	m. Immunity, Hypersensitivity and Autoimmune disorders(RA, SLE)		
2	**Systemic Pathology:** (Each condition in this section is to be taught under the specific headings of Causes, Development, Gross and Microscopic only). a) **Respiratory System:** Pneumonia, Bronchitis, Bronchiectasis, Asthma, Emphysema, Tuberculosis and Carcinoma of Lungs Occupational Lung Diseases b) **Cardiovascular System:** Rheumatic Heart diseases, Myocardial infarction, Atherosclerosis and other disease of blood vessels–TAO, Buerger's diseases, Thrombophlebitis, Congenital Heart diseases, c) **Alimentary System:** Peptic Ulcer,Ulcerative lesions of intestine d) **Liver:** Hepatitis, Cirrhosis e) **CNS:** Meningitis, Encephalitis, Cerebral Hemorrhage, CVA, Brief outline of CNS Tumors f) **Peripheral Nerves:** Neuritis, Neuralgia, GBS, Neuropathies. g) **Bones and Joints:** Osteomyelitis, Osteoarthritis, Septic,Arthritis, Gout, Osteomalacia, Bone Tumors briefly*- Giant Cell tumor, Osteosarcoma, Ewing's h) **Muscles:** Disorder of muscles including Poliomyelitis and Myopathies, Volkman's Ischaemic contracture i) **Skin:** Scleroderma, Psoriasis, Autoimmune disorders j) **Urinary System:** Nephritis, Glomerular Nephritis, Nephrotic Syndrome **Endocrine System:** Thyroid–Thyroiditis and Thyroid tumors, Diabetes	**43**	**57%**

2.MICROBIOLOGY

Teaching Scheme:

Teaching Scheme	L	T	P	Contact Hours	Credit	**ESE Max**	**Practical/ Viva Max**	**IA Max**	**CSE Max**	**Total Mark**
	2	0	0	2	4	40	-	10	-	50

3	**General Bacteriology:** a) Introduction, historical background, classification of micro–organisms b) Morphology of bacteria c) Staining of bacteria d) Sterilization e) Cultivation and culture media	**12**	**16%**
4	**Systemic Bacteriology:** a) Gram-Positive cocci–Streptococci, Pneumococci, Staphylococci b) Gram-Negative Cocci–Gonoand Meningococci c) Gram-Positive Bacilli d) Gram-Negative Bacilli-Typhoid, Cholera, Dysentry e) Aerobic- Diptheria, T.B., Leprosy f) Anaerobic-Tetanus,Gas Gangrene, Botulism	**15**	**20%**
5	**Immunology:** a) Immunity, Antigens b) Antibodies, Ag-Ab Reaction c) Agglutination, precipitation d) Hypersensitivity reactions	**10**	**13%**
6	**General Virology:** a) Poliomyelitis b) Rabies c) Demonstration of testing: diagnosis of AIDS, Hepatitis and Syphilis d) Corona virus disease e) Chikun guniya f) Dengue g) H1N1Virus	**15**	**20%**
7	**Parasitology:** a) Malaria b) Amoebiasis c) Round worm and loop worm	**8**	**11%**
8	**Mycology:** a) Candidiasis b) Ring worm	**6**	**8%**

	c) Scabies		
9	**Applied Microbiology:** Concerning systemic, Parasitology, Mycology, Immunology, hypersensitivity tests a) Infection of bones/joints b) Infection of burns case c) Serological test – interpretation of Antistreptolysin O (ASO), Rheumatoid Arthritis(RA),Venereal Disease Research Laboratory(VDRL), C-Reactive Protein (CRP), Widal, Enzyme-Linked Immuno assay(ELISA) (HIV, HBsAg), PCR based diagnosis d) Demonstration of gross/microscopic appearance of various parasites	**5**	**6%**
10	**Aseptic universal precautions & practices Biomedical waste and universal precautions**	**5**	**6%**

Course Outcomes:

CO No.	Course Outcome Statement	Unit Nos.
CO1	**Understand** the fundamental mechanisms of disease processes including cell injury, inflammation, repair, circulatory disturbances, and immune responses.	1
CO2	**Describe** the etiology, pathogenesis, and morphological features of systemic diseases affecting major organ systems.	2
CO3	**Explain** the morphology, classification, transmission, and laboratory diagnosis of bacteria, viruses, parasites, and fungi causing human diseases.	3, 4, 6, 7, 8
CO4	**Apply** knowledge of microbiology and pathology to interpret laboratory investigations, serological tests, and infection control measures relevant to physiotherapy practice.	5, 9, 10
CO5	**Analyze** pathological and microbiological conditions influencing musculoskeletal, neurological, respiratory, cardiovascular, and systemic disorders in clinical settings.	1,2, 6,7,8,9

CO-PO Mapping

CO \ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	2	2	1	–	–	–	–	–
CO2	2	2	1	–	–	–	–	–
CO3	2	2	1	–	–	–	–	–
CO4	3	2	1	3	–	3	3	3
CO5	3	3	2	3	3	3	3	3
Total	12	11	6	6	3	6	6	6
No. of COs mapping with POs	5	5	5	2	1	2	2	2
Average	2.4	2.2	1.2	3.0	3.0	3.0	3.0	3.0
Rounded (Average)	2	2	1	3	3	3	3	3

Teaching & Learning Methodology:

- Case-based discussions on infections and diseases.
- Demonstration of laboratory techniques like staining and culturing.
- Peer-to-peer quiz sessions and presentations.

Books Recommended:

1. Pathologic basis of disease by Cotran, Kumar, Robbins
2. General Pathology– by Bhende
3. Harshmohan. "Textbook of Pathology". New Delhi: Jaypee Brothers Medical Publication.
4. Bhardwaj JR. "Boyd's Textbook of Pathology". Wolters Kluwer India Pvt. Ltd.
5. Sharma P. "A Textbook of Pathology". Elsevier Health Sciences.
6. Harshmohan. "Textbook of Microbiology". New Delhi: Jaypee Brothers Medical Publication.
7. Vani I. "A Textbook of Microbiology for Physiotherapists". S Vikas and Company (PV).
8. Baveja CP. "Textbook of Microbiology for Physiotherapy".
9. Textbook of Microbiology– by R.Ananthnarayan & C.K. Jayram Panikar

List of Open-Source Software/learning website:

- https://www.pathologyoutlines.com/

3. PHARMACOLOGY

Teaching Scheme:

Teaching Scheme	L	T	P	Contact Hours	Credit	**ESE Max**	**Practical/ Viva Max**	**IA Max**	**CSE Max**	**Total Mark**
	2	0	0	2	4	40	-	10	-	50

Prerequisite: Knowledge of human physiology, especially cardiovascular, CNS, and respiratory systems.

COURSE OBJECTIVE:

1. Understand the basic principles of pharmacokinetics and pharmacodynamics.
2. Identify commonly used drugs in physiotherapy and their mechanisms of action.
3. Evaluate adverse effects and contraindications of therapeutic drugs.
4. Correlate drug therapy with physiotherapeutic interventions for optimal outcomes.
5. Comprehend psychiatric disorders and their impact on patient behaviour within physiotherapy practice.
6. Apply effective communication and integrate mental health awareness into physical rehabilitation programs.

SYLLABUS:

Sr. No.	Topic	Hours	Weightage (%)
1	Chemical character and general action of drugs	2	3%
2	Principles of drug administration and routes of administration, Distribution, metabolism, excretion of drugs, factors influencing drug reaction, dosage and factors modifying it.	8	11%
3	Drug toxicity including allergy and idiosyncrasy.	6	8%
4	a. Definition, action, indication, contraindication, adverse reaction of the following: b. Drugs acting as PNS: stimulating and inhibiting, Adrenergic, cholinergic and anti- cholinergic. Drugs acting at NM junction. c. Muscle relaxants d. Drugs acting on CNS: Analgesics, antipyretics, narcotics, ant-inflammatory, antiepileptic, sedatives, hypnotics, tranquilizers, anticonvulsants, stimulants, psychotherapeutics, alcohol e. Pulmonary effects of general and local anesthetic agents f. Drugs acting on CVS: anti-hypertensive, vasoconstrictors, vasodilators, diuretics, mucolytic agents. Drugs that influence myo-cardiac contractility and heart-rate. g. Drugs acting on Respiratory system: bronchodilators, drugs used in inhalation therapy, drugs acting on CNS and	36	47%

	cardio respiratory system which influence the physical exercise.		
5	Antimicrobial Agents	4	5%
6	Immunological agents and vaccines	4	5%
7	Chemotherapeutic agents	4	5%
8	Endocrine Pharmacology: thyroxin, glucocorticoids, anabolic steroids, calcitonin, insulin and hypoglycemic agents, Estrogen and Progesterone Drugs used for Osteoporosis, Vitamin D, Calcium, Phosphorous	8	10%
9	Heamatinics – vitamin B, Iron	2	3%
10	Irritants counter-irritants	2	3%

4. PSYCHIATRY

Teaching Scheme:

Teaching Scheme	L	T	P	Contact Hours	Credit	**ESE Max**	**Practical/ Viva Max**	**IA Max**	**CSE Max**	**Total Mark**
	1	0	0	1	2	40	-	10	-	50

11	**Mental health:** a) Normal Mental Health b) Criteria of normality or matured personality c) Factors contributing to normal mental health.	03	9%
12	**Study of Abnormal Personality:** a) Neurotic b) Hysterical c) Psychotic d) Paranoid e) Schezoid Psychopathicetc.	05	13%
13	**General Etiological Factors:** a) Hereditary b) Genetical Constitutional c) Acquired d) Traumatic e) Infective f) Toxic g) Degenerative h) Social and Environmental including pathogenic family patterns i) Precipitating causes Frustration and conflicts.	05	13%
14	**Symptomatology and Treatment of Psychoses:** a) Functional - Functional Schizophrenic, reaction group, simple, paranoid, catatonic, hebephrenic paranoid state, paranoia, juvenile, schizophrenia, autistic thinking, dementia. b) Organic - Toxic confused states, senile psychoses, arteriosclerotic, degenerative, G.P.I. c) Affective Disorders: Dynamics of Mania, hypomania, chronic mania, M.P.D. Involutional depression, senile depression, postpartum depressive reactions, reactive and neurotic depression, endogenous depression, suicide (egoistic, Altruistic, Anomic) Epileptic Disorders: Epileptic Psychoses.	05	13%

15	**Neurosis:** a) Symptomatology, diagnosis and treatment and psychodynamics of anxiety state, hysteria, conversion reaction, dissociative reaction, dual personality, obsessional neurosis, phobias, hypochondriasis, neurasthenia and mental fatigue.	05	13%
16	**Mental Retardation:** a) Definition, b) Etiological factors - Prenatal, postnatal, infective, hormonal, congenital. c) Types of mental retardation, clinical types-microcephaly, hydrocephalus, mongot, family idiocy, phenylketonuria etc. Symptomatology of various grades of retardation, differential diagnosis and treatments.	05	13%
17	**Child Psychology:** a) Behavior disorders- Nailbiting, Enuresis, Truancy, Thumb sucking, Speech difficulties, Pica, Vomiting, Anorexia, delinquency.	05	13%
18	**Introduction to dynamics of Psychophysical disorders:** a) Asthma, skin rashes, hypertension, bowel disorders. b) Introduction to treatment in psychiatry - E.C.T., Insulin, coma therapy. c) Drug therapy - Tranquilizer, Mood elevators, hypnotics and sedatives, Psychotherapy - Deep and superficial, individual and group, expressive, suppressive, environmental manipulation, re- educative. d) Psychodrama e) Psychoanalysis Play Therapy	05	13%

Course Outcomes:

CO No.	Course Outcome Statement	Unit Nos.
CO1	**Understand** the basic principles of pharmacokinetics, pharmacodynamics, drug administration, and factors influencing drug actions.	1, 2
CO2	**Describe** the actions, indications, contraindications, and adverse effects of drugs acting on the nervous, cardiovascular, respiratory, endocrine, and musculoskeletal systems.	3,4,8,9,10
CO3	**Explain** the concepts of normal and abnormal mental health, personality types, etiological factors, and major psychiatric disorders.	11, 12, 13, 14, 15,16
CO4	**Apply** pharmacological and psychological knowledge to support safe physiotherapy practice, patient behavior management, and therapeutic decision-making.	4,5,6,7,17, 18
CO5	**Analyze** the impact of drug therapy and psychological factors on rehabilitation outcomes, patient compliance, and multidisciplinary healthcare management.	4,5,6,7,8,14,15,16,17,18

CO-PO Mapping

CO \ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	2	2	1	–	–	–	–	–
CO2	2	2	1	–	–	–	–	–
CO3	2	2	1	–	–	–	–	–
CO4	3	2	1	3	–	3	3	3
CO5	3	3	2	3	3	3	3	3
Total	12	11	6	6	3	6	6	6
No. of COs mapping with POs	5	5	5	2	1	2	2	2
Average	2.4	2.2	1.2	3.0	3.0	3.0	3.0	3.0
Rounded (Average)	2	2	1	3	3	3	3	3

Teaching & Learning Methodology

- Visual lectures using flowcharts, flashcards, and drug mechanisms.
- Case discussions
- Prescription reading and role-play simulations.
- Debates, mind maps, and therapeutic communication workshops.

Books Recommended:

1. Tripathi KD. "Essentials of Medical Pharmacology". New Delhi: Jaypee Brothers Medical Publishers.
2. Uday Kumar P. "Pharmacology for Physiotherapy Students".New Delhi: CBS Publishers & Distributors.
3. Shrivastava SK. "APC Pharmacology for Physiotherapy". Agra: APC Books
4. Probst M, Helvik Skjaerven L. "Physiotherapy in Mental Health and Psychiatry".Edinburgh: Churchill Livingstone.
5. Bhatia MS. "Psychiatry for Physiotherapists and Occupational Therapists". New Delhi: CBS Publishers & Distributors Pvt Ltd.
6. Ahuja N. "A Short Textbook of Psychiatry". New Delhi: Jaypee Brothers Medical Publishers.

5. EXERCISE THERAPY II

Prerequisite: Fundamental knowledge of musculoskeletal anatomy and basic biomechanics.

Teaching Scheme:

Teaching Scheme	L	T	P	Contact Hours	Credit	**ESE Max**	**Practical/ Viva Max**	**IA Max**	**CSE Max**	**Total Mark**
	4	0	4	8	12	80	80	20	20	200

COURSE OBJECTIVE:

1. Apply advanced therapeutic exercises to restore mobility and strength.
2. Design individualized exercise programs for specific musculoskeletal conditions.
3. Assess functional limitations and evaluate outcomes of exercise interventions.
4. Demonstrate safe practices and adaptations in exercise therapy.

SYLLABUS:

Sr. No.	Topic	Hours	Weightage%
1	**Passive movements:** a. Definition b. Types c. Technique d. Effects and uses e. CPM unit f. Comparison of active with passive movements for all joints of exterminates, neck and trunk.	10	3%
2	**Stretching** a. Definitions related to stretching b. Types of contractures c. Differentiation properties of soft tissues affecting elongation and aims of stretching d. Manual and mechanical stretching, e. Cycle mechanical stretching f. Indications g. Aims of stretching h. Principles i. Contraindications j. Myo fascial Release Technique (MFR)	25	8%

	Traction a) Types b) Effects c) Principles of application for cervical and lumbar spine d) Traction to soft tissues of joints– gliding movements	10	3%
	Manual Therapy and Peripheral Joint Mobilization a) Causes of restriction of R.O.M., b) Prevention of restrictions, c) Schools of Manual Therapy d) Basics of Maitland, Kaltenborn, Mulligan mobilization e) Biomechanical basis for joint mobilization f) Principles of application of Joint Mobilization g) Joint shapes and types of motion; h) Stretching ,glides, compression, traction i) Grades of mobilization j) Techniques of mobilization of various joints of limbs k) Mobilization of joints R.O.M. through functional diagonal patterns, l) Joint manipulation- definition, types m) Indications, contraindications, precautions of joint mobilization and manipulation	35	12%
	Advance soft tissue Mobilization a) Basic principles of MET (Muscle Energy Techniques), b) MFR (Myofacial Release Techniques) c) PRT (Positional Release Therapy) d) Neural Tissue Mobilization e) Active release techniques (Basics only)	17	6%
	Manual Muscle Testing (M.M.T.) a) Need of M.M.T b) Uses of MMT c) Fundamental principles, d) Anatomical and physiological basis, e) Oxford scale of muscle gradation, f) Principles of isolation, substitution, stabilization, g) Grading procedure for muscles of extremities, neck and trunk. h) Limitations of manual muscle testing i) Techniques of MMT for individual muscles and group j) Static power Test k) Dynamic power Test l) Endurance test m) Dynamometers –Technique of application and uses n) Voluntary control of movement gradation by Bobath, Brunnstrom.	35	12%

	Posture: a) Types b) Factors influencing posture c) Regulation of posture and posture mechanism d) Pelvic tilt and postural deviations of spine and its treatment e) Principles of re-education: corrective methods and techniques f) Patient education g) Crawling exercises: principles, types, effects and uses of clapp's crawl	10	3%
	Strengthening of muscles (PRE): a) Physiology of muscle performance - Structure of skeletal muscle, chemical and mechanical events during contraction and relaxation, muscle fiber type, motor unit, forces gradation. Causes of decreased muscle performance Physiologic adaptation to training: Strength & Power, Endurance b) Principles involved to prevent muscle wasting, c) Rood's technique of initiating muscle contraction, d) Progressive strengthening of muscles (loads assisted and resisted exercises) e) Use of equipment f) Re-education of muscles and restoration of functions g) Practice of strengthening of muscles of limbs, neck, trunk and face h) Use of manual and mechanical resistance i) Contraindications j) Isometric and isokinetic exercises regime k) Plyometrics l) Specific exercise regimens m) Isotonic: deLormes, Oxford, macqueen, Circuit weight training n) Isometric: BRIME (Brief Resisted Isometric Exercise), Multiple Angle Isometrics Isokinetic regimens	30	9%
	Proprioceptive Neuromuscular Facilitation a) Introduction b) Responses of NM mechanism c) Definitions & goals d) Basic neurophysiologic principles of PNF e) Basic techniques of PNF patterns of arm, leg, neck, head and trunk (emphasis on straight patterns) f) Specific techniques of facilitation g) Mobility: contract relax, hold relax, rhythmic initiation h) Strengthening: slow reversals, repeated contractions, timing for emphasis, rhythmic stabilization i) Stability: alternating isometric, rhythmic stabilization	35	12%

	j) Skill: timing for emphasis, resisted progression endurance: slow reversals, agonist reversal k) Inhibitory techniques l) Bobath, rood's and kabat approaches		
10	**Relaxation** a) Definitions: Muscle Tone, Postural tone, Voluntary Movement b) Degrees of relaxation c) Pathological tension in muscle d) Stress mechanics e) Types of stresses Effects of stress on the body mechanism f) Indications of relaxation g) Methods & techniques of relaxation h) Principles & uses i) Techniques of relaxation-General, Local, Jacobson's, Mitchel's, additional methods	10	3%
11	**Balance** a) Physiology of balance: b) Contributions of sensory systems c) Processing sensory information d) Generating motor output e) Components of balance (sensory, musculoskeletal, biomechanical) f) Causes of impaired balance g) Examination & evaluation of impaired balance h) Activities for treating impaired balance: mode, posture, movement i) Precautions & contraindications j) Types k) Balance retraining	15	5%
12	**Neuro-Muscular coordination:** a) Anatomy & Physiology of cerebellum with its pathways b) Definitions: Co-ordination, Inco-ordination c) Causes for Inco-ordination d) Test for co-ordination: equilibrium test, non-equilibrium test e) Factors governing coordination f) Principles of re-education g) Frenkel's Exercise: uses and technique of application and progression h) Home exercise.	15	5%
13	**Functional Reeducation:** a) Mat activities for reeducation of hemiplegics, paraplegics, quadriplegics and cerebral palsy b) Walking and functional re-education in neurological and Orthopedic conditions.	15	5%

14	**Aerobic exercises:** a) Definition and key terms b) Physiological response to aerobic exercise c) Examination and evaluation of aerobic capacity d) Exercise Testing, fitness testing, stress testing for healthy and convalescent individuals. e) Determinants of an Exercise Program f) Normal and abnormal response to acute aerobic exercise g) Physiological changes that occur with training h) Application of Principles of an Aerobic conditioning program for patients – types and phases of aerobic training i) Physiological effects and therapeutic uses, Pharmacological Aspects of exercises.	15	5%
15	**Breathing exercises:** a) Mechanisms of normal breathing b) Muscles of respiration c) Changes in thoracic cage during the process of respiration d) Segmental and diaphragmatic breathing exercises, pursed lip breathing e) FET f) Breathing mechanisms and postural drainage g) Assistive measures h) Techniques, indications and contraindications	20	7%
16	**Hydrotherapy:** a) Physiological properties of water and hydrodynamics b) Use of special equipments, techniques, Effects and uses, merits and demerits of hydrotherapy c) Applications of Bad Ragaz Technique d) Indications and contraindications	07	2%

Course Outcomes:

CO No.	Course Outcome Statement	Unit Nos.
CO1	**Understand** the principles, techniques, indications, and contraindications of passive movements, stretching, traction, and relaxation methods.	1, 2, 3, 10
CO2	**Describe** the biomechanical and physiological basis of joint mobilization, soft tissue mobilization, muscle performance, posture, and balance.	4,5,7,8,11
CO3	**Explain** the principles and procedures of manual muscle testing, strengthening techniques, proprioceptive neuromuscular facilitation, and coordination exercises.	6,8,9,12
CO4	**Apply** therapeutic exercise techniques for improving strength, flexibility, balance, coordination, aerobic capacity, and respiratory function in patients.	8,9,11, 14,15
CO5	**Analyze** functional limitations and movement dysfunctions to plan exercise-based interventions for musculoskeletal, neurological, and cardiopulmonary conditions.	6,7,13, 14, 15, 16

CO-PO Mapping

CO \ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	2	2	1	–	–	–	–	–
CO2	2	2	1	–	–	–	–	–
CO3	2	2	1	–	–	–	–	–
CO4	3	2	1	3	–	3	3	3
CO5	3	3	2	3	3	3	3	3
Total	12	11	6	6	3	6	6	6
No. of COs mapping with POs	5	5	5	2	1	2	2	2
Average	2.4	2.2	1.2	3.0	3.0	3.0	3.0	3.0
Rounded (Average)	2	2	1	3	3	3	3	3

Teaching & Learning Methodology:

- Practical Demonstrations
- Hands-on Practice
- Case Studies and Clinical Scenarios
- Collaborative Learning
- Group Discussion

Books Recommended:

1. Gardiner D. "Principles of Exercise Therapy". New Delhi: CBS Publication.

2. Kisner C, Colby LA. "Therapeutic Exercise: Foundations and Techniques". New Delhi: Jaypee Brothers

Medical Publishers.

3. Hollis M. "Practical Exercise Therapy".Oxford: Blackwell Science.

4. Hislop HJ, Montgomery J, Connelly B, et al. "Daniels and Worthingham's Muscle Testing: Techniques

of Manual Examination and Performance Testing".New York: Elsevier.

5. Norkin CC, Levangie PK. "Joint Structure and Function: A Comprehensive Analysis". Philadelphia:

F.A. Davis Company.

6. KINESIOLOGY

Prerequisite: Understanding of anatomy and basic physics of body movement.

Teaching Scheme:

Teaching Scheme	L	T	P	Contact Hours	Credit	ESE Max	Practical/ Viva Max	IA Max	CSE Max	Total Mark
	2.5	0	0	2.5	5	40	-	10	-	50

COURSE OBJECTIVE:

1. Understand the biomechanics of human movement and joint function.
2. Analyze muscle actions and posture in normal and pathological conditions.
3. Apply kinesiological principles to rehabilitation strategies.
4. Demonstrate movement assessment techniques for clinical use.

SYLLABUS:-

Sr. No.	Topic	Hours	Weightage %
1	**Mechanics of joint motion:** a) Joint design b) Materials used in human joints c) General properties of connective tissues d) Joint function e) Joint motion f) Structure and types of joints g) Types of movements	05	5%
2	**Mechanics of muscular action:** a) Mobility and stability functions of muscles b) Elements of muscle structure c) Muscle function d) Classification of muscles, e) Line of pull, f) Types of contractions, g) Role of muscles and tendons, h) Action of two joint motions, i) Non customary action	04	4%

3	**Skilled Movements:** a) Rope climbing b) Cycling c) Running d) Ballistic movements e) Volitional movements	**02**	**2%**
4	**Impetus:** Impetus to external objects and receiving impetus	**02**	**2%**
5	**Posture** a) Static and dynamic posture b) Postural control c) Kinetics and kinematics of posture d) Ideal posture Analysis of posture	**05**	**5%**
6	**Locomotion:** a) Normal gait analysis b) Definition of gait c) Phases of normal gait d) Normal gait with kinetic and kinematics e) Abnormal pathological gaits f) Gait training Kinematics and kinetics of the trunk and upper extremities in relation to gait, staircase climbing and running	**15**	**16%**
7	**Biomechanics of joints:** Kinetics, kinematics and patho-mechanics of various joint– hip, knee, ankle, foot, shoulder, elbow, wrist and hand	**30**	**32%**
8	**Biomechanics of spinal column:** a) Spinal curves b) Articulations c) Non-contractile soft tissue of column d) IV disc e) Ligaments f) Intrinsic equilibrium g) Movements of spinal column Muscle mechanics	**12**	**14%**
9	**Mechanics of pelvic complex:** a) Pelvis at rest, In standing body and in motion b) Lumbo-sacral Rhythm Patho-mechanics of pelvis	**03**	**3%**
10	**Mechanics of thorax:** a) General structure and function b) Rib cage movements c) The muscles associated with the rib cage d) Movements between ribs and vertebrae, sternum and ribs, Patho-mechanics of respiration	**06**	**6%**

11	**The Tempero-mandibular Joint General features, structure and function**	**02**	**2%**
12	**Postural strain and occupational hazards:** a) Biomechanical aspects of abnormal postural and postural strain due to occupation b) Correct use of body mechanics at home, at school, work and at Recreation	**03**	**3%**
13	**Kinetics and kinematics of ADL:** a) Supine to sitting b) Sitting to standing c) Squatting d) Climbing up and down e) Pushing f) Pulling g) Over head activities h) Walking i) Running Jogging.	**06**	**6%**

Course Outcomes:

CO No.	Course Outcome Statement	Unit Nos.
CO1	**Understand** the principles of joint structure, connective tissue properties, and mechanics governing human joint motion.	1, 7
CO2	**Describe** the mechanics of muscular action, types of contractions, skilled movements, and factors influencing posture and stability.	2,3,5
CO3	**Explain** the biomechanics of normal and abnormal gait, locomotion, and functional movements of the trunk and extremities.	6,13
CO4	**Apply** kinesiological principles to analyze posture, gait deviations, and movement patterns during activities of daily living.	5,6,12,13
CO5	**Analyze** the kinetics and kinematics of joints, spine, pelvis, thorax, and temporomandibular joint in normal and pathological conditions.	7,8,9,10,11

CO-PO Mapping

CO \ PO	**PO1**	**PO2**	**PO3**	**PO4**	**PO5**	**PO6**	**PO7**	**PO8**
CO1	2	2	1	–	–	–	–	–
CO2	2	2	1	–	–	–	–	–
CO3	2	2	1	–	–	–	–	–
CO4	3	2	1	3	–	3	3	3

CO5	3	3	2	3	3	3	3	3
Total	12	11	6	6	3	6	6	6
No. of COs mapping with POs	5	5	5	2	1	2	2	2
Average	2.4	2.2	1.2	3.0	3.0	3.0	3.0	3.0
Rounded (Average)	2	2	1	3	3	3	3	3

Teaching & Learning Methodology:

- Lecture method
- Group discussion
- Use of models
- Assignmen

Books Recommended:

1. Progressive Resisted Exercises - Margaret Hollis
2. Therapeutic Exercise - Carol Kisner
3. Kinesiology – Cynthia Norkins
4. PNF – Knott and Voss
5. Therapeutic Exercise - Basmajian and Wolf
6. Muscle Testing - Daniel Kendall
7. Clinical Evaluation - Lacote
8. Muscle stretching and auto stretching - Olaf Evjenth
9. Orthopedics Evaluation – David J Magee

7. ELECTRO THERAPY

Prerequisite: Understanding of physics (electricity), anatomy, and nerve-muscle physiology.

Teaching Scheme:

Teaching Scheme	L	T	P	Contact Hours	Credit	**ESE Max**	**Practical/ Viva Max**	**IA Max**	**CSE Max**	**Total Mark**
	4	0	4	8	12	80	80	20	20	200

COURSE OBJECTIVE:

1. Understand the physical principles and therapeutic effects of electrotherapy modalities.
2. Select appropriate electrotherapy techniques for different conditions.
3. Apply safety guidelines and contraindications in clinical practice.
4. Evaluate treatment outcomes using patient feedback and clinical signs.

SYLLABUS:

Sr. No.	Topic	Hours	Weightage %
1	**LOW FREQUENCY CURRENTS**		
	Review of physics: Current, electricity, Ohm's law, Resistance, Rheostats, potentiometers, Electromagnetic induction, capacitors, valves, semiconductors and transistors	10	3%
	Nerve Muscle Physiology: Resting potential, action potential, propagation of action potential, motor unit, synapse and synaptic transmission of impulses. Effect of negative and positive electrodes on Nerve & accommodation	10	3%
	Faradic Current: Definition, characteristic and modified faradic current, sinusoidal current, parameters of faradic stimulation, physiological and therapeutic effects of faradic-stimulation. Indication, contra-indications and precautions, techniques of stimulation- group muscle stimulation, faradic footbath, faradism Under pressure and pelvic floor muscle re-education	20	6%
	Interrupted Direct Current: Introduction & characteristics, Parameters of stimulation, physiological and therapeutic uses of stimulation, precautions	15	5%

	Galvanic Current: Introduction & characteristics, Parameters of stimulation, physiological and therapeutic uses of stimulation, Precautions	05	2%
	Iontophoresis: Definition, principles of iontophoresis, physiological and therapeutic uses, indications, techniques of iontophoresis, Principles of treatment, contra-indications and dangers	05	2%
	a) Sinusoidal Current & Diadynamic Current in Brief b) Cathodal /Anodal galvanism c) Micro-currents d) High Voltage Pulsed Galvanic Stimulation (HVPGS)	05	2%
	TENS: a) Definition b) Theories of pain modulation emphasizing on "Pain Suppression System" c) Types of TENS d) Techniques of application e) Types of Electrodes & Placements of Electrodes f) Physiological Effects and therapeutic uses **g)** Indication and contra –indications	25	8%
2	**MEDIUM FREQUENCY CURRENT**		
	Interferential current: Definition, characteristics, physiological & therapeutic effects of Interferential current, techniques of application, indications, contra-indications and precautions **Russian Currents** Parameters, technique of application, effects and uses, Indications and Contraindications **Rebox currents** Parameters, technique of application, effects and uses, Indications and Contraindications	25	8%
	Bio-feedback: a) Introduction b) Principles of bio-feedback c) Therapeutic effects of bio-feedback d) Different types of biofeedback e) EMG biofeedback f) Positive and negative feedback g) Technique of application h) Indications and contra-indications	10	3%

	Advanced Electrotherapy: a) Computerization in electrotherapy, b) Programming of parameters of treatment, c) Appropriate selections of parameters and combination therapy, **Combination therapy-** a) Principles, b) Therapeutic uses and indications like,Ultrasound therapy with stimulation or TENS etc.	10	3%
	Electrical currents for Care of the wound	05	2%
3	**HIGH FREQUENCY CURRENT**		
	Short Wave Diathermy (SWD): a. Introduction b. Physiological effects and Therapeutic effects of SWD c. Methods of application (capacitor field method and cable method etc.) d. Techniques of treatment, indication, contra-indications and dangers.	25	8%
	Pulsed SWD: a. Definition b. Characteristics c. Mechanism of work d. Physiological effects and therapeutic effects e. Indications, techniques of application f. Principles of treatment and contra-indications	05	2%
	Ultrasonic Therapy: a. Introduction and characteristics b. Ultrasound Therapy parameters c. Coupling media d. Therapeutic effects e. Indications, contra-indications and dangers f. Testing of apparatus g. Techniques of application & dosage, Phonophoresis	30	9%
	Infra Red Rays (IRR): a. Production of infrared rays b. Luminous and non – luminous generators, penetration, technique of application, physiological effects and therapeutic uses of infra-red rays, duration and frequency of treatment, indications and Contra-indications, dangers and precautions.	05	2%
	Ultra Violet Rays (UVR): Production of UVR, test dose, physiological effects of UVR dosimetry in UVR. PUVA	05	2%

	LASER: a. Introduction and characteristics b. Effects on tissue c. Therapeutic effects d. Principles of application e. Indications f. Contra-indications and dangers	15	5%
	Microwave Diathermy (MWD): a) Introduction and characteristics, physiological effects b) Therapeutics effects c) Techniques of application and principles of treatment d) Indications Contra-indications and dangers	05	2%

	Superficial heat modalities: a) Structure of the apparatus b) Composition of wax and mineral oils physiological effects and therapeutic uses of wax bath c) Technique of application	05	2%
	Other Heating Modalities: a) Heating pad b) Moist heat and fluid therapy	05	2%
	Cryotherapy: a) Physiological effects and therapeutic uses of ice therapy b) Techniques of application c) Contra–indication to ice treatment	05	2%
	Hydro therapy: a) Properties of water buoyancy b) Effects of buoyancy on movement c) Hubbard tank d) Contrast bath, Whirlpool bath	15	5%
	Care of the wound: a) UVR, b) LASER Ultrasound	05	2%
	Recent advances in Electro-physiotherapy: a) High power class IV LASER b) Shock wave c) PEMF (Pulse Electro Magnetic Energy), High Intensity Magneto-therapy d) Spinal Decompression, e) Pneumatic Compression therapy f) Functional Electrical Stimulation g) TECAR Therapy h) Cold air cryo therapy i) Virtual and Augmented Reality Brief idea about Robotic therapy	34	10%

Course Outcomes:

CO No.	Course Outcome Statement	Unit Nos.
CO1	**Understand** the physical principles of electricity, nerve–muscle physiology, and the mechanisms underlying therapeutic electrical currents.	1
CO2	**Describe** the characteristics, physiological effects, indications, contraindications, and precautions of low- and medium-frequency electrotherapy modalities.	1, 2
CO3	**Explain** the therapeutic applications and treatment parameters of high-frequency currents, ultrasound, laser, and superficial heating modalities.	3,4
CO4	**Apply** appropriate electrotherapy modalities safely for pain management, muscle stimulation, wound care, and rehabilitation based on clinical indications.	1, 2, 3,4
CO5	**Analyze** patient conditions and treatment responses to select, combine, and modify electro-physiotherapeutic interventions using conventional and recent modalities.	2,3

CO-PO Mapping

CO \ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	2	2	1	–	–	–	–	–
CO2	2	2	1	–	–	–	–	–
CO3	2	2	1	–	–	–	–	–
CO4	3	2	1	3	–	3	3	3
CO5	3	3	2	3	3	3	3	3
Total	12	11	6	6	3	6	6	6
No. of COs mapping with POs	5	5	5	2	1	2	2	2
Average	2.4	2.2	1.2	3.0	3.0	3.0	3.0	3.0
Rounded (Average)	2	2	1	3	3	3	3	3

Teaching & Learning Methodology:

- Lecture method
- Group discussion
- Simulation
- Assignment
- Clinical Placements

Books Recommended:

1. Clayton's Electrotherpy
2. Electrotherapy Explained – Low and Reed
3. Electrotherapy - Kahn
4. Therapeutic Electricity – Sydney Litch
5. Clinical Electrotherapy – Nelson and Currier

8. MISCELLANEOUS MEDICINE SUBJECTS

Teaching Scheme:

Teaching Scheme	L	T	P	Contact Hours	Credit	ESE Max	Practical/ Viva Max	IA Max	CSE Max	Total Mark
	0.5	0	0	0.5	1	-	-	-	-	-

8.1 RADIOLOGY

(Not for University Exam)

Prerequisite: Basic knowledge of skeletal and thoracic anatomy.

COURSE OBJECTIVE:

1. Interpret basic radiological images relevant to physiotherapy diagnosis.
2. Understand the principles of X-ray, CT, and MRI imaging.
3. Identify musculoskeletal abnormalities on radiographic images.
4. Apply radiological findings in planning physiotherapy treatment.

SYLLABUS:

Sr. No.	Topic	Hours
1	Introduction to Radiology	01
2	Importance of Radiology in Physiotherapy	01
3	X-rays of fractures of different bones in the body	01
4	X-rays of different stages of fracture healing	01
5	X-rays of different Orthopedic conditions- Osteoarthritis, Rheumatoid arthritis	01
6	Cervical & lumbar spondylosis, foot deformities etc.	01
7	X-rays of common chest conditions	01
8	C.T Scan, M.R.I., Angiography, 3D reconstruction of bones & joints	02

Teaching & Learning Methodology

- Slide-based explanation of X-rays, MRI, and CT images.
- Problem-solving on image interpretation for physiotherapy use.
- Case-based discussions linking radiology to treatment.
- Quizzes on image identification and terminology.
- Integration of normal vs abnormal visual cues in diagnostics

8.2 ENT
(Not for University Exam)

Prerequisite: Anatomy and physiology of ear, nose, throat and cranial nerves.

COURSE OBJECTIVE:

1. Recognize common ENT conditions and their clinical presentations.
2. Understand the functional implications of ENT disorders.
3. Identify physiotherapy considerations in ENT rehabilitation.

SYLLABUS:

Sr. No.	Topic	Hours	Weightage %
1	Anatomy &Physiology of Hearing: Assessment & Management of Hearing Loss	01	20%
2	Introduction to Disease of ENT: Otitis-media, Sinusitis & Rhinitis	01	20%
3	Facial Nerve Palsy: Causes & Management	01	20%
4	Larynx & Associated functional paralysis with tracheostomy & Care of tracheostomy	01	20%
5	Vertigo: Causes, Assessment & Management.	01	20%

Teaching & Learning Methodology:

- Lecture Method
- Group Discussion
- Dramatic Presentation

8.3 OPTHALMOLOGY
(Not for University Exam)

Prerequisite: Basic structure and function of the eye, nervous system, and systemic diseases.

COURSE OBJECTIVE:

1. Understand the anatomy and common disorders of the eye.
2. Identify visual impairments relevant to physiotherapy.
3. Correlate ocular conditions with systemic diseases.

SYLLABUS:-

Sr. No.	Topic	Hours	Weightage %
1	**Definition of blindness, and visual disability evaluation, investigative procedures used for testing visual failures. Common eye diseases** a) Including Refractory errors b) Conjunctivitis c) Trachoma	01	20%
2	Cataract and glaucoma, Squint and ptosis.	01	20%
3	Eye lesions in leprosy, including causes treatment and complications Of lagophthalmos.	01	20%
4	Causes, clinical features and treatment of disorders of ocular Movement occurring in diseases such as myasthenia gravis, progressive supra-nuclear palsy and lower motor neuron diseases.	01	20%
5	Causes, clinical features, treatment and prognosis in inflammatory disorders, vitamin A deficiency, emphasis on preventable causes and Prophylactic measures.	01	20%

Teaching & Learning Methodology:

- Lecture Method
- Group Discussion
- Dramatic Presentation

9. ALLIED THERAPEUTICS (Basics only)
(Not for University exam)

Teaching Scheme:

Teaching Scheme	L	T	P	Contact Hours	Credit	ESE Max	Practical/ Viva Max	IA Max	CSE Max	Total Mark
	0.5	0	0	0.5	1	-	-	-	-	-

Prerequisite: Openness to integrative therapies and basic anatomy-physiology background.

COURSE OBJECTIVE:

1. Understand alternative therapeutic modalities like yoga and acupuncture.
2. Explore the role of naturopathy and hydrotherapy in patient care.
3. Evaluate the effectiveness and indications of allied therapies.

SYLLABUS:-

Sr. No.	Topic	Hours	Weightage %
1	Acupuncture and acupressure: definition, principles, techniques, Physiological and therapeutic effects, contraindications and dangers	02	11%
2	Introduction to Naturopathy	02	11%
3	Magneto-therapy	02	11%
4	**Yoga Sana - Pranayama and their scientific study** a) Definition b) Principles of Yoga c) Yogasana-Technique, Benefits, Contraindications & cautions for each Asanas: **i. Asanas in supine** Pawanamuktasana, Ardha-Halasana, Halasana, Setubandhasana, Naukasana, Matsyasana, Shavasana, Sarvangasana **ii. Asanas in prone** Bhujangasana, Ardha-Shalabhasana, Dhanurasana, Makarasana **iii. Asanas in sitting** Padmasana, Siddhasana, Sukhasana, Yoga-mudrasana Virasana. Vajrasana, Gomukhasana, Pashchimottanasana **iv. Asanas in standing** Padhastasana, Padangusthasana, Uttanasana, Utkatasana, Tadasana, Trikonasana **v. Pranayama** Anulom-vilom, Kapalbhati	11	58%
5	Dry Needling	02	9%

Teaching & Learning Methodology:

- Lecture Method
- Group Discussion
- Dramatic Presentation

10.PROFESSIONAL PRACTICE & ETHICS -II

(Not for University exam)

Teaching Scheme:

Teaching Scheme	L	T	P	Contact Hours	Credit	ESE Max	Practical/ Viva Max	IA Max	CSE Max	Total Mark
	0.5	0	0	0.5	1	-	-	-	-	-

10.1 PROFESSIONAL PRACTICE & ETHICS

Prerequisite: Basic understanding of professional conduct, communication, and health ethics.

COURSE OBJECTIVE:

1. Understand the ethical and legal responsibilities of a physiotherapist.
2. Demonstrate professional behavior and communication in clinical practice.
3. Apply ethical principles in decision-making and patient management.

SYLLABUS:-

Sr. No.	Topic	Hours	Weightage %
1	Ethical code of concept	01	11%
2	Communication skills	02	22%
3	Physiotherapist - patient relationship	03	33%
4	Interviews – Types of interviews, skills of interviewing	03	34%

Teaching & Learning Methodology:

- Lecture Method
- Group Discussion
- Dramatic Presentation

Books Recommended:

1. Gabard DL, Martin MW. "Physical Therapy Ethics".
2. Raja K, Davis F, Kumar T. "Ethical Issues: Perspectives for the Physiotherapist".
3. Kirsch NR. "Ethics in Physical Therapy: A Case-Based Approach"

10.2 EVIDENCE BASED PRACTICE & ICF

Prerequisite: Basic understanding of scientific reading, research principles, and patient documentation.

COURSE OBJECTIVE:

1. Understand the importance of evidence-based practice in physiotherapy.
2. Critically appraise scientific literature for clinical decision-making.
3. Apply the ICF model to assess and document patient functioning and disability.

SYLLABUS:-

Sr. No.	Topic	Hours	Weightage %
1	**Introduction to Evidence Based Practice** Definitions, Evidence Based Practice, Evidence Based Physiotherapy Practice	02	20%
2	**Concepts of Evidence based Physiotherapy** Awareness, consultation, judgment, creativity	02	20%
3	**Development of Evidence based knowledge** The individual professional, professionals within a discipline, professionals across disciplines	03	30%
4	**Evidence Based Practitioner** The reflective practitioner, the E-model	03	30%

Teaching & Learning Methodology:

- Lecture Method
- Group Discussion
- Dramatic Presentation