

STUDY & EVALUATION SCHEME

OF

BACHELOR OF PHYSIOTHERAPY

(BPT-II YEAR/ III SEMESTER)

[Applicable w.e.f. Academic Session 2015-16 till revised]



INTEGRAL UNIVERSITY, LUCKNOW
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Syllabus approved by Board of Study, Faculty Board, Academic Council, Executive Council of the Integral University, Lucknow

**STUDY & EVALUATION SCHEME
BACHELOR OF PHYSIOTHERAPY (BPT)
(w.e.f. July 2015)**

II - Year

III - Semester

S. No.	Subject Code	Subject Title	Periods per week			Credits	Evaluation Scheme				Subject Total
			L	T	P		Sessional		Exam		
							CT	TA	Total	ESE	
1.	PT 201	Pathology	2	1	0	3	25	15	40	60	100
2.	PT 202	Microbiology	2	1	0	3	25	15	40	60	100
3.	PT 203	Exercise therapy	3	1	0	4	25	15	40	60	100
4.	PT 204	Electrotherapy	3	1	0	4	25	15	40	60	100
5.	PT 205	Surface Anatomy & Palpation Skills	2	1	0	3	25	15	40	60	100
6.	PT 206	Psychology & Experimental Psychology	2	1	0	3	25	15	40	60	100
7.	PT 207	Exercise therapy-Lab	0	0	4	2	30	30	60	40	100
8.	PT 208	Electrotherapy-Lab	0	0	4	2	30	30	60	40	100
9.	PT 209	Surface Anatomy & Palpation Skills-Lab	0	0	2	1	50	50	100	00	100
Total			14	06	10	25	260	200	460	440	900

L: Lecture **T:** Tutorials **P:** Practical **CT:** Class Test

TA: Teacher Assessment **ESE:** End Semester Examination

Sessional Total: Class Test + Teacher Assessment

Subject Total: Sessional Total + End Semester Examination (ESE)

SUBJECT NAME: PATHOLOGY

SUBJECT CODE: PT201

(w.e.f. July 2015)

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COURSE OBJECTIVES:

At the end of the course, the student will be able to-

Acquire the knowledge of concepts of cell injury & changes produced thereby in different tissues & organs-; capacity of the body in healing process. Recall the etiopathogenesis, the pathological effects & the clinico-pathological correlation of common infections & non-infectious diseases. Acquire the knowledge of concepts of neoplasia with reference to the Etiology, gross & microscopic features, diagnosis, & prognosis in different tissues, & organs of the body. Correlate normal & altered morphology of different organ systems in different diseases needed for understanding disease process & their clinical significance (with special emphasis to neuromusculo-skeletal & cardio-respiratory systems). Acquire knowledge of common immunological disorders & their resultant effects on the human body. Understand in brief, about the Hematological diseases & investigations necessary to diagnose them & determine their prognosis.

UNIT-I: CELL INJURY, INFLAMMATION & NEOPLASMS:

(8 Hours)

1. Cells:

Brief out line of cell injury, hypertrophy, atrophy, degeneration, necrosis and gangrene.

2. Inflammation:

Definition, vascular and cellular phenomena, difference between transudate and exudates, granuloma.

3. Neoplasm:

Definition, characteristic features, benign and malignant tumor, spread of tumor, cancer pain syndrome.

UNIT-II: VASCULAR & CARDIORESPIRATORY SYSTEM:

(8 Hours)

1. Circulatory Disturbance:

Odema, Hemorrhage, Embolism, Thrombosis, Infraction, Shock, Volkmann's ischemic contracture.

2. Blood Disorder:

Concepts of Anemia, Bleeding disorder- Hemophilia.

3. Cardio Vascular System (CVS):

Etiopathogenesis and Gross pathology of Atherosclerosis, coronary heart disease, Rheumatic heart disease.

4. Respiratory System:

Chronic Bronchitis, Asthma, Bronchiectasis, Emphysema.

UNIT-III: BONES, JOINTS & MUSCULAR SYSTEM:**(8 Hours)****1. Bones:**

Etiopathogenesis and gross pathology of following conditions: Rickets/Osteomalacia, Osteoporosis, Osteomyelitis, Hyperparathyroidism.

2. Joint:

Osteoarthritis, Rheumatoid Arthritis, Gout, Spondyloarthopathy (including Ankylosing Spondylitis), Osteonecrosis, Paget's disease,

3. Muscles:

Myositis ossificans, Myofascial Pain syndrome, Septic arthritis.

UNIT-IV: HEPATO-BILIARY, ENDOCRINE & INTEGUMENTARY SYSTEM:**(8 Hours)****1. Hepato-Biliary System:**

Jaundice Types, etiopathogenesis and diagnosis.

2. Endocrine: Diabetes Mellitus, Non Neoplastic lesion of thyroid-Thyrotoxicosis, Myxedema.**3. Skin:**

Brief outline of Scleroderma, Psoriasis, Pressure Ulcer, and Burn.

UNIT-V: CENTRAL NERVOUS SYSTEM:**(8 Hours)****1. CNS:**

Etiopathogenesis and gross pathology of following conditions- Meningitis, Encephalitis, Parkinson's, Amyotrophic lateral sclerosis, Ataxias, Multiple sclerosis, Neuropathies (Carcoat Marie Tooth disease, Compression and Entrapments, diabetics G.B. Syndrome), malformation, CVA, Extradural and Intra Dural Hematoma.

2. Muscle Neuropathies:

Poliomyelitis, Myopathies, Myasthenia gravis, Muscular dystrophy.

BOOKS RECOMMENDED:

1. Basic Patho – Kumar and Clark
2. Text book of Pathology - by Harsh Mohan
3. Textbook of Pathology By Boyd
4. Pathologic basis of diseases by Cotran, Kumar, Robbins
5. General Pathology – by Bhende

SUBJECT NAME: MICROBIOLOGY
SUBJECT CODE: PT 202
(w.e.f. July 2015)

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COURSE OBJECTIVE:

At the end of the course, the candidate will be able-

At the end of the course, the candidate will have sound knowledge of the agent responsible for causing human infections, pertaining to Immunology, Virology, Bacteriology, & mislenious condition. Microbiology involves the study of common organisms causing diseases including nosocomial infections and precautionary measures to protect one from acquiring infections. The knowledge and understanding of Microbiology of diseases is essential to institute appropriate treatment or suggest preventive measures to the patient.

UNIT-I: GENERAL MICROBIOLOGY: (8 Hours)

1. Introduction and history of Medical Microbiology.
2. Morphology, Nutritional Requirements, Metabolism, Growth, Classification and identification of Bacteria.
3. Sterilizations and Disinfection.

UNIT-II: IMMUNOLOGY: (8 Hours)

1. Infection, Immunity, Antigens, antibody, antigen-Antibody Reaction, Complement System.
2. Structure and Function of Immune system, Immune Response.
3. Immunodeficiency Diseases, Hypersensitivity, Autoimmunity.

UNIT-III: BACTERIOLOGY: (8 Hours)

1. Staphylococcus, Streptococcus, Pneumococcus, Neisseria
2. Cornybacterium, Clostridium, Bacillus
3. Enterobacteriaceae, Pseudomonas, Vibrio.
4. Mycobacteria, Treponema.

UNIT-IV: VIROLOGY: (8 Hours)

1. General Characteristics and Classification of Virus
2. Virus-Host Interaction
3. DNA and RNA Virus
4. Measles, Mumps, Rubella, Polio, Influenza, Rabies, Dengue, Hepatitis, HIV

UNIT-V: MISLANEOUS: (8 Hours)

1. Medical Mycology
2. Parasitology
3. Normal Microbial Flora of The Human Body
4. Hospital Acquired Infection
5. Universal Precautions

BOOKS RECOMMENDED:

1. Textbook of Parasitology- K. D. Chatterjee (12th Ed.)
2. Text Book of Microbiology - Paniker (9th Ed.)
3. Essentials of Medical Microbiology- Sastry Apurba Shankar (1st Ed.)
4. Textbook of Microbiology - P.Chakraborty
5. Textbook of Microbiology – Anantnarayan

SUBJECT NAME: EXERCISE THERAPY

SUBJECT CODE: PT 203

(w.e.f. July 2015)

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COURSE OBJECTIVE:

At the end of the course, the candidate will be able-

To define the various terms used in Exercisetherapy. To demonstrate various starting & derived positions. To demonstrate movements in terms of various Anatomical planes. To describe & also acquire the skill of use of various tools of the Goniometry and measure range of motion. Acquire the skill of application of various manual muscle testing procedures & describe the Physiological effects, therapeutic use, merits / demerits of the same and also know about various tools used in strengthening exercise. Acquire a skill of assessment of Gait, Posture and uses of Ambulatory devices and their measurement on Models. Recall the basic principles of Physics related to mechanics of movement / motion & will be able to understand the application of such principles to the simple equipment designs & their efficacy in therapeutic gymnasium, & suspension therapy used in therapeutics.

UNIT-I INTRODUCTION TO EXERCISE THERAPY:

(8 Hours)

1. Fundamental Starting Position & Derived Position:

Brief description of fundamental starting position & derived position including joint positions, muscle work, stability, effects & uses in physiotherapy.

2. Movements:

Definition of Movements, Brief description & Classification of movements. Techniques of application, indication, contraindication, effects & uses of the following-

- i. Active movements
- ii. Active assisted movement
- iii. Passive movement
- iv. Resisted movement

UNIT-II RANGE OF MOTION & GONIOMETRY:

(8 Hours)

1. Range of Motion:

Definition of Range of Motion, normal range of motion, normal & abnormal End feels of the Joints.

2. Goniometry:

Definition of Goniometry and its types. Principles, technique and application of goniometry. Testing position, procedure and measurement of ROM of the joints of upper limbs, lower limbs and trunk.

UNIT-III MANUAL MUSCLE TESTING (MMT) & STRENGTHENING EXERCISE:

1. Manual Muscle Testing (MMT): (8 Hours)

Definition, Principle, Grading and applications techniques. Indication, Contraindication, Precaution, Testing position, procedure and grading of muscles of the upper limb, lower limb trunk, face and neck.

2. Strengthening Exercise:

Definition of Strengthening Exercise. Principles, different mode of Strengthening Exercise, Indication, Contraindication, Precaution, techniques of application of Strengthening Exercises.

UNIT-IV THERAPEUTIC GYMNASIUM AND SUSPENSION THERAPY: (8 Hours)

1. Therapeutic Gymnasium:

Set-up of gymnasium & its importance, various equipment in the gymnasium. Operational skills, effects, & uses of each equipment.

2. Suspension Therapy:

Definition, types, principles, technique of application, indication, contraindication, precaution, effects & uses of suspension therapy.

UNIT-V POSTURE, GAIT AND AMBULATORY TRAINING: (8 Hours)

1. Posture:

Posture overview: Mechanism of the normal posture. Abnormal posture: assessment, types, aetiology management including therapeutic exercises.

2. Gait:

Definition of Gait, Gait cycle. Time-distance Parameters of Gait, determinants of gait, Gait deviations.

3. Ambulatory Training:

Walking aids and its types, indications, contraindication, effects & uses in various training techniques.

RECOMMENDED BOOKS:

1. Kisner and Colby. F.A. Davis, Therapeutic Exercises Foundations and Techniques
2. Gardiner, Principle of Exercise Therapy, C.B.S. Delhi.
3. Norkins & White F.A. Davis, Measurement of Joint Motion: A Guide to Goniometry.
4. Wood - W.B. Saunders, Beard's Massage.
5. Kendal, Muscle testing and functions, Williams & Wilkins.
6. Bates and Hanson, Aquatic Exercise Therapy
7. Margaret Hollis, Massage for therapist: Margaret Hollis
8. Hollis, Lab Exercise Therapy, Blackwell Scientific Publications.

SUBJECT NAME: ELECTROTHERAPY
SUBJECT CODE: PT 204
(w.e.f. July 2015)

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COURSE OBJECTIVE:

At the end of the course, the candidate will be able-

Describe the Production & Physiological effects, Therapeutic uses, merits, demerits indication & contraindications of various low, medium & high frequency modes of currents. Describe the Physiological effects & therapeutic uses of various therapeutic ions & topical pharmacotherapeutic agents to be used for the application of Iontophoresis & sonophoresis. Acquire the skill of Application of the Electro therapy modes on models, for the purpose of Assessment & Treatment. Acquire an ability to select the appropriate mode as per the tissue specific & area specific application.

UNIT-I: BASIC OF CURRENTS & LOW FREQUENCY CURRENTS: (8 hours)

1. Basic of Currents:

Introduction to History of currents, Production, Physiological effects on Nerve and Muscle tissue and therapeutic effects to AC, DC and Modified Currents.

2. Transcutaneous Electric Nerve Stimulation (TENS):

History of Transcutaneous Electric Nerve Stimulation (TENS). Types of low frequency, pulse widths, frequencies & intensities used as TENS applications. Principle of clinical application effects & uses indications, contraindications, precautions, and operational skills of equipment & patient preparation. Theories of pain relief by TENS.

3. Muscle Stimulators (MS):

Muscle Stimulators (MS) Types of frequency, pulse widths, frequencies & intensities used as MS applications. Principle of clinical application effects & uses indications, contraindications, precautions, and operational skills of equipment & patient preparation.

4. Iontophoresis:

Definition, Physiological & Therapeutics effects, Principle of application, Methods of Application, indications, contraindications, precautions.

UNIT-II: MEDIUM FREQUENCY CURRENTS: (8 hours)

1. Interferential Therapy (IFT):

History of Interferential therapy (IFT), Types of medium frequency, pulse widths, frequencies & intensities used as IFT applications. Principle of clinical application, effects, uses, indications, contraindications, precautions, and operational skills of equipment & patient preparation. Theories of pain relief by IFT.

2. Russian Currents (RC):

Russian Currents (RC), Types of frequency, pulse widths, frequencies & intensities used as RC applications. Principle of clinical application effects, uses, indications, contraindications, precautions, and operational skills of equipment & patient preparation.

UNIT-III: HIGH FREQUENCY CURRENTS-I:**(8 hours)****1. Ultrasound Therapy Unit (UST):**

Ultrasound therapy Unit (UST), Production, Physiological & Therapeutics effects, Principle of application of Ultrasound therapy, Methods of Application of UST, phonophoresis, effects, indications, contraindications, precautions, and patient preparation.

2. Long Wave Diathermy (LWD):

Long Wave Diathermy (LWD), Production, Physiological & Therapeutics effects, Principle of application of Long Wave Diathermy, Methods of Application of LWD, effects, indications, contraindications, precautions, and patient preparation.

3. Extracorporeal Shock Wave Therapy (ECSWT):

^ Brief overview

UNIT-IV: HIGH FREQUENCY CURRENTS-II:**(8 hours)****1. Shortwave Diathermy (SWD):**

Shortwave Diathermy (SWD), Production, Physiological & Therapeutics effects, Principle of application of Shortwave Diathermy, Methods of Application of SWD, types of electrodes, effects, indications, contraindications, precautions, dangers and patient preparation.

2. Micro Wave Diathermy (MWD):

Micro Wave Diathermy (MWD), Production, Physiological & Therapeutics effects, Principle of application of Microwave Diathermy, Methods of Application of MWD, effects, indications, contraindications, precautions, dangers and patient preparation.

UNIT-V: ELECTRO PHYSICAL AGENTS -I:**(8 hours)****1. Cryotherapy:**

Cryotherapy (CT), Principle of Cryotherapy, Physiological effects, Methods of Application of Cryotherapy. Principle of clinical application, effects, uses, indications, contraindications, precautions, and patient preparation. Theories of pain relief by Cryotherapy.

2. Paraffin Wax Bath:

Paraffin wax bath, Principle of application of Paraffin wax bath, Physiological effects, Methods of Application of PWB, effects, uses, indications, contraindications, precautions, and patient preparation.

3. Hydro-collator Bath:

Hydro-collator Bath, Principle of application of Hydrocollator Bath, Physiological effects, Methods of Application of Hydro-collator Bath, effects, uses, indications, contraindications, precautions, and patient preparation.

4. Electrical Heating Pads:

Electrical heating pads, Principle of application of Electrical heating pads, Physiological effects, Methods of Application of Electrical heating pads, effects, uses, indications, contraindications, precautions, and patient preparation.

RECOMMENDED BOOKS:

1. Clayton's Electrotherapy
2. Electrotherapy Explained- Sheila & Kitchen.
3. Clinical Electrotherapy- Nelson and Currier
4. Electrotherapy Explained- Low and Reed
5. Electrotherapy in Rehabilitation-Meryl Roth Gersh
6. Therapeutic modalities in rehabilitation-William E. Prentice

SUBJECT NAME: SURFACE ANATOMY & PALPATION SKILLS
SUBJECT CODE: PT 205
(W.e.f. July 2015)

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COURSE OBJECTIVE:

At the end of the course, the candidate will be able-

About the reviews the surface anatomy and provide an organized approaches for locating osseous and soft tissue landmark relating to major extremity joints, (foot/ ankle, knee, hip, shoulder girdle, elbow and wrist/hand) and all regions of the spine (cervical, thoracic, lumber, pelvic). Be able to palpate the landmarks, and prominent area of the body for examination. Essential observation and palpation skill to prepare the students for more advanced instruction concerning physical examination and manual therapeutics. Be able to palpate the landmarks, and prominent area and its importance during examination.

UNIT-I INTRODUCTION OF SURFACE ANATOMY & PALPATION SKILLS: (4 Hours)

1. Terminology related to surface anatomy, and palpation skill.
2. Principle of surface marking and palpation
3. Types of palpation and its uses in assessment.
4. Ethical and legal issues regarding palpation techniques .

UNIT-II LANDMARK LOCATION AND PALPATION SKILL OF SPINE: (4 Hours)

1. Landmark location and palpation skill of Lumbopelvic region.
2. Landmark location and palpation skill of Thoracic Spine.
3. Landmark location and palpation skill of Cervical and Occipital region.

UNIT-III LANDMARK LOCATION AND PALPATION SKILL OF U/E: (4 Hours)

1. Landmark location and palpation skill of Shoulder Girdle.
2. Landmark location and palpation skill of Elbow.
3. Landmark location and palpation skill of Wrist & Hand

UNIT-IV LANDMARK LOCATION AND PALPATION SKILL OF L/E: (4 Hours)

1. Landmark location and palpation skill of Foot & Ankle.
2. Landmark location and palpation skill of Knee.
3. Landmark location and palpation skill of Hip.

UNIT-V BASIC POSTURAL OBSERVATIONAL SKILL: (4 Hours)

1. Normal body alignment, symmetry and plumb line .
2. Observation of static and dynamic posture in various positions (sitting, standing & walking) and gait.

RECOMMENDED BOOKS:

1. A Manual Therapist Guide to Surface anatomy and Palpation Skills by David Byfield & Stuart Kinsinger.
2. Orthopaedics Physical Assessment. By D Magee.
3. An Introduction of fundamental Anatomy by David Sinclair.
4. Human Anatomy by B.D. Chaurasiya- All 3 volumes.
5. Surface anatomy By John S.P. Lumley
6. Surface and Radiological Anatomy By A. Halim

SUBJECT NAME: PSYCHOLOGY & EXPERIMENTAL PSYCHOLOGY
SUBJECT CODE: PT 206
(w.e.f. July 2015)

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COURSE OBJECTIVE:

At the end of the course, the candidate will be able-

Be able to define the term Psychology & its importance in the Health delivery system, & will gain knowledge of Psychological maturation during human development & growth; & alterations during aging process. Be able to understand the importance of psychological status of the person in health & disease; environmental & emotional influence on the mind & personality. Describe in brief the various treatment modalities commonly used.

UNIT-I: (6 hours)

Definition, application and methods in psychology, Biology of Behavior, Sensory processes and perception, Principles of learning, Classical and Instrumental Conditioning, Cognitive learning, Memory, long and short – term memories, forgetting, amnesia.

UNIT-II: (6 hours)

Thinking and Language, Concepts, thinking process, problem- solving and decision making, creative thinking and language communication, Motivation, Biological and Social motives, frustration and conflict of motives, motives to know and be effective, Emotion and Stress, Expression and perception of emotions, physiology and application of emotion.

UNIT-III: (6 hours)

Social perceptions, influences, and relationships, Attitudes, Nature and measurement of attitudes, Factors in attitude change, Behavior and attitudes.

UNIT-IV: (6 hours)

Development- A Lifespan Perspective (infancy, childhood, adolescence, adult, old age), Personality, Defining and thinking about personality, Theories and issues and controversies and research.

UNIT-V: (6 hours)

Abnormal Psychology, Therapy for Psychological distress, Brief description of Psychological assessment and testing.

BOOKS RECOMMENDED

1. Morgan C.T., King R. A., Weijz J. R. Schopler J.
2. Introduction to Psychology, 7th edn. (Tata McGraw-Hill Publishing Co. Ltd.)
3. Human Development, 5th. (Tata McGraw Hill Publishing Co. Ltd)
4. Munn N.L. Introduction to Psychology-(Premium Oxford, I.B.P. Publishing Co.)
5. Parameshwaran E. G. & Ravichandra K. - Experimental Psychology: A Laboratory Manual (1st edn.) (Seema Publications, Delhi) Munn Julia (ed.)

SUBJECT NAME: EXERCISE THERAPY LAB
SUBJECT CODE: PT 207
(w.e.f. July 2015)

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Course Objectives: This course involves a detailed study of physiological effects, application techniques, effects, indications, and contra-indications, precautions for exercises used in Physiotherapy.

Course description: Student should be able to explain the rationale for the prescription of safe and effective exercises.

1. Position of joints, muscle work, and stability of various fundamental and derived positions.
2. Different types of muscle contraction, muscle work, group action of muscles and coordinated movement.
3. Measurement of ROM of joints- upper limb, lower limb and trunk.
4. To practice the grading of muscle strength region wise upper limb and lower limb and trunk.
5. Various techniques of progressive strengthening exercises of muscles region wise.
6. Various types of suspension therapy and its applications on various part of body-region wise.
7. Structure and functions along with application of various equipment in a gymnasium.
8. Use of various ambulation aids in gait training.
9. Evaluate ADLs and practice various training techniques.
10. Normal and abnormal posture & practice various corrective techniques.
11. Plan & practice program for normal person of various age groups

RECOMMENDED BOOKS:

1. Kisner and Colby. F.A. Davis, Therapeutic Exercises Foundations and Techniques
2. Gardiner, Principle of Exercise Therapy, C.B.S. Delhi.
3. Norkins & White F.A. Davis, Measurement of Joint Motion: A Guide to Goniometry.
4. Wood - W.B. Saunders, Beard's Massage.
5. Kendal, Muscle testing and functions, Williams & Wilkins.
6. Margaret Hollis, Massage for therapist: Margaret Hollis
7. Hollis, Lab Exercise Therapy, Blackwell Scientific Publications.

SUBJECT NAME: ELECTROTHERAPY LAB

SUBJECT CODE: PT 208

(w.e.f. July 2015)

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Course Objectives: This course involves a detailed study of physiological effects, application techniques, effects, indications, and contra-indications, precautions for Electrotherapy Modalities used in Physiotherapy.

Course description: Student should be able to explain the rationale for the prescription of safe and effective electrotherapy modalities.

1. Basic operation of electric supply to the equipment and safety device.
2. Sensory and motor stimulation of nerves and muscles by various types of low frequency currents on self.
3. Locate and stimulate different motor points region wise, including the upper and lower limb, trunk & face.
4. Therapeutic application different low frequency currents faradic foot bath, faradism under pressure, Iontophoresis.
5. TENS Stimulator, its operation and application - regionwise.
6. IFT-Its operation and application –region wise
7. Muscle stimulators, its operation and different method of application- region wise.
8. Hydrocollatar bath unit, its operation and different method of application- region wise.
9. Paraffin wax bath unit, its operation and different method of application- regionwise.
10. Various forms of therapeutic cold application region wise including ice, cold packs, vapocoolant sprays, etc.
11. Long wave therapy unit, its operation and different method of application- regionwise.
12. Ultrasound unit, its operation and methods of application - regionwise.
13. Short wave diathermy unit, its operation and different methods of application - regionwise.
14. Microwave diathermy unit, its operation and different methods of application - regionwise.

RECOMMENDED BOOKS

1. Clayton's Electrotherapy.
2. Electrotherapy Explained- Sheela & Kicthen.
3. Clinical Electrotherapy- Nelson and Currier.
4. Electrotherapy Explained- Low and Reed.
5. Electrotherapy in Rehabilitation-Meryl Roth Gerth
6. Therapeutic modalities in rehabilitation-William E. Prentice

SUBJECT NAME: SURFACE ANATOMY & PALPATION SKILLS LAB
SUBJECT CODE: PT 209
(W.e.f. July 2015)

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Course Objectives: This course involves a detailed study of Surface anatomy of Human body, Palpation Skill, indications, and contra-indications, precautions for palpation during the assessment in Physiotherapy.

Course description: Student should be able to explain the rationale for the prescription of safe and effective knowledge of surface anatomy and Palpation Skill.

1. Terminology related to surface anatomy, and palpation skill.
2. Principle of surface marking and palpation, Types of palpation and uses.
3. Normal body alignment and symmetry.
4. Observation of static and dynamic posture in various positions (sitting, standing & walking) and gait.
5. Landmark location and palpation skill of Lumbopelvic region.
6. Landmark location and palpation skill of Thoracic Spine.
7. Landmark location and palpation skill of Cervical and Occipital region.
8. Landmark location and palpation skill of Shoulder Girdle.
9. Landmark location and palpation skill of Elbow.
10. Landmark location and palpation skill of Wrist & Hand
11. Landmark location and palpation skill of Foot & Ankle.
12. Landmark location and palpation skill of Knee.
13. Landmark location and palpation skill of Hip.

RECOMMENDED BOOKS:

1. A Manual Therapist Guide to Surface anatomy and Palpation Skills by David Byfield & Stuart Kinsinger.
2. Orthopaedics Physical Assessment. By D Magee.
3. An Introduction of fundamental Anatomy by David Sinclair.
4. Anatomy of Chaurasiya- All 3 volumes.
5. Surface anatomy By John S.P. Lumley
6. Surface and Radiological Anatomy By A. Halim