CHARUTAR VIDYA MANDAL UNIVERSITY

FACULTY OF PHYSIOTHERAPY

RITA A. PATEL INSTITUTE OF PHYSIOTHERAPY

BPT - Semester IV

Course Code: BPT – 123

Course Title: Exercise Therapy

Course Credit Hours:

Hrs. / Wk			Credits			Marks		Total Marks
L	P	T	L	P	T	Theory	Practical	
4	8	12	4	4	8	100	100	200

Course Outline: In this course, the students will learn the principles and effects of exercise as a therapeutic modality and will learn the techniques in the restoration of physical functions. After the course on exercise therapy student will be able to understand the different types of exercise for the benefit of patient in different situations and conditions both in health and disease or disorder. The emphasis should be giving hands on training on execution of various types of exercises and passive procedures.

Sr No	Title of the Unit	Minimum number of Hours
1.	Specific exercise regimens	12
2.	Proprioceptive Neuromuscular Facilitation	18
3.	Suspension Therapy	14
4.	Functional Re-education	10
5.	Aerobic Exercise	15
6.	Stretching	25

7.	Manual Therapy & Peripheral Joint Mobilization	40
8.	Balance	10
9.	Co-ordination Exercise	10
10.	Posture	14
11.	Walking Aids	15
12.	Basics in Manual Therapy & Applications with Clinical reasoning	25
13.	Hydrotherapy	10
14.	Individual and Group Exercises	10

Total hours (Theory): 76 Hrs

Total hours (Practical): 152 Hrs

Total hours: 228 Hrs

Unit Sr No	Course Content	Hours of Teaching
1	**Specific exercise regimens**	**12 Hours**
1.1	Isotonic: De Lormes, Oxford, Macqueen, Circuit weight training	
1.2	Isometric: BRIME (Brief Resisted Isometric Exercise), Multiple Angle	
1.3	Isometrics Isokinetic regimens	
2	**Proprioceptive Neuromuscular Facilitation**	**18 Hours**
2.1	Definitions & goals	
2.2	Basic neurophysiologic principles of PNF: Muscular activity, Diagonals patterns of movement: upper limb, lower limb	
2.3	Procedure: components of PNF	
2.4	Techniques of facilitation	
2.5	Mobility: Contract relax, Hold relax, Rhythmic initiation	
2.6	Strengthening: Slow reversals, repeated contractions, timing for emphasis, rhythmic stabilization Stability: Alternating isometric, rhythmic stabilization	
2.7	Skill: timing for emphasis, resisted progression Endurance: slow reversals, agonist reversal	
2.8	Demonstrate the PNF techniques	
3	**Suspension Therapy**	**14 Hours**
3.1	Definition, principles, equipment's & accessories, Indications & contraindications, Benefits of suspension therapy	
3.2	Types of suspension therapy: axial, vertical, Pendular Techniques of suspension therapy	

	for upper limb Techniques of suspension therapy for lower limb	
3.3	Demonstrate to use the technique of suspension therapy for mobilizing and strengthening joints and muscles	
4	**Functional Re-education**	**10 Hours**
4.1	Lying to sitting: Activities on the Mat/Bed, Movement and stability at floor level; Sitting activities and gait; Lower limb and Upper limb activities	
4.2	Demonstrate techniques for functional re-education	
5	**Aerobic Exercise**	**15 Hours**
5.1	Definition and key terms; Physiological response to aerobic exercise, Examination and evaluation of aerobic capacity – Exercise Testing, Determinants of an Exercise Program, The Exercise Program, Normal and abnormal response to acute aerobic exercise, Physiological changes that occur with training	
5.2	Application of Principles of an Aerobic conditioning program for patients – types and phases of aerobic training	
6	**Stretching**	**25 Hours**
6.1	Definition of terms related to stretching; Tissue response towards immobilization and elongation	
6.2	Determinants of stretching exercise, Effects of stretching	
6.3	Inhibition and relaxation procedures	
6.4	Precautions and contraindications of stretching	
6.5	Techniques of stretching	
6.6	Demonstrate the techniques for muscle stretching	
7	**Manual Therapy & Peripheral Joint Mobilization**	**40 Hours**

7.1	Schools of Manual Therapy, Principles, Grades, Indications and Contraindications, Effects and Uses – Maitland, Kaltenborn, Mulligan	
7.2	Biomechanical basis for mobilization, Effects of joint mobilsation, Indications and contraindications, Grades of mobilization, Principles of mobilization, Techniques of mobilization for upper limb, lower limb, Precautions	
8	**Balance**	**10 Hours**
8.1	Definition, Physiology of balance: contributions of sensory systems, processing sensory information, generating motor output	
8.2	Components of balance (sensory, musculoskeletal, biomechanical)	
8.3	Causes of impaired balance, Examination & evaluation of impaired balance, Activities for treating impaired balance: mode, posture, movement, Precautions & contraindications, Types Balance retraining	
9	**Co-ordination Exercise**	**10 Hours**
9.1	Anatomy & Physiology of cerebellum with its pathways Definitions: Co-ordination, Inco-ordination	
9.2	Causes for Inco-ordination, Test for co-ordination: equilibrium test, non-equilibrium test Principles of co-ordination exercise	
9.3	Frenkel's Exercise: uses of Frenkel's exercise, technique of Frenkel's exercise, progression, home exercise	
9.4	Demonstrate exercises for training co-ordination – Frenkel's exercise	
10	**Posture**	**14 Hours**
10.1	Definition, Active and Inactive Postures, Postural Mechanism, Patterns of Posture, Principles of re-education: corrective methods and techniques, Patient education	
10.2	Assess and evaluate posture and gait	
11	**Walking Aids**	**15 Hours**

11.1	Types: Crutches, Canes, Frames; Principles and training with walking aids	
11.2	Assess and train for using walking aids	
12	**Basics in Manual Therapy & Applications with Clinical reasoning**	**25 Hours**
12.1	Examination of joint integrity a. Contractile tissues ii. Non contractile tissues	
12.2	Mobility - assessment of accessory movement & End feel	
12.3	Assessment of articular & extra-articular soft tissue status i. Myofascial assessment ii. Acute & Chronic muscle hold iii. Tightness iv. Pain-original & referred	
12.4	Basic principles, Indications & Contra-Indications of mobilization skills for joints & soft tissues i. Maitland ii. Mulligan iii. McKenzie iv. Muscle Energy Technique v. Myofascial stretching vi. Cyriax vii. Neuro Dynamic Testing	
12.5	Demonstrate mobilization of individual joint regions	
13	**Hydrotherapy**	**10 Hours**
13.1	Definitions, Goals and Indications, Precautions and Contraindications, Properties of water, Use of special equipment, techniques, Effects and uses, merits and demerits	

14	**Individual and Group Exercises**	**10 Hours**
14.1	Advantages and Disadvantages, Organization of Group exercises, Recreational Activities and Sports	

Course Outcomes (COs):

At the end of the course, the students will be able to

CO1	Explain the physiological effects of endurance, strengthening, balance and coordination effects on various systems
CO2	Differentiate types of exercise based on the therapeutic effects
CO3	Discuss the indications, contraindications and precautions to be taken while performing Passive Range of Motion, Active Range of Motion, assisted exercises, Endurance exercise, Strengthening exercise, Balance and coordination exercise
CO4	Demonstrate competencies in prescribing Passive Range of Motion, Active Range of Motion, assisted exercises, Endurance exercise, Strengthening exercise, Balance and coordination exercise
CO5	Prescribe therapeutic exercise based on the assessment findings
CO6	Demonstrate competencies in preparing and implementing evidence-based exercise protocol for movement impairments under supervision
CO7	Demonstrate abilities to document the dosage and progression as per the prescribed format
CO8	Communicate the exercise protocol effectively to the stakeholders

Recommended Text Books:

1. Principle of Exercise Therapy -Gardiner - C.B.S. Delhi
2. Practical Exercise Therapy - Hollis - Blackwell Scientific Publications
3. Therapeutic Exercises Foundations and Techniques - Kisner and Colby -F.A. Davis
4. Manipulation and Mobilization: Extremities and Spinal Techniques, Edmond, Mosby
5. Aquatic Exercise Therapy-Bates and Hanson -W.B. Saunders

Recommended Reference Books:

1. Therapeutic Exercises - Basmajian - Williams and Wilkins
2. Proprioceptive Neuromuscular Facilitation: Voss et al, Williams & Wilkins
3. Orthopedic Physical Therapy: Woods, Churchill Livingstone
4. Manual Examination and Treatment of Spine & Extremities: Wadsworth, Lippincott

CO-PO-PSO Matrix:

	PO1	**PO2**	**PO3**	**PO4**	**PO5**	**PO6**	**PO7**	**PO8**	**PO9**	**PO10**	**PO11**	**PO12**	**PSO1**	**PSO2**	**PSO3**	**PS04**	**PSO5**
CO1	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
CO2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
CO3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
CO4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
CO5	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
CO6	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
CO7	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
CO8	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3

CHARUTAR VIDYA MANDAL UNIVERSITY

FACULTY OF PHYSIOTHERAPY

RITA A. PATEL INSTITUTE OF PHYSIOTHERAPY

BPT - Semester IV

Course Code: BPT – 124

Course Title: Bio - Physics

Course Credit Hours:

Hrs. / Wk			Credits			Marks		Total Marks
L	P	T	L	P	T	Theory	Practical	
1	2	3	1	1	2	50	50	100

Course Outline: To understand the concept and basic principles to know electrotherapy equipment's is given under this topic. The student will be taught about physics related to electrotherapy and application on human body tissues.

Sr No	Title of the Unit	Minimum number of Hours
1.	Physical principles	24
2.	Effects of Current Electricity	14
3.	Electrical Supply	08
4.	Various agents	10

Total hours (Theory): 19 Hrs

Total hours (Practical): 38 Hrs

Total hours: 57 Hrs

Unit Sr No	Course Content	Hours of Teaching
1	**Physical principles**	**25 Hours**
1.1	Structure and properties of matter -solids, liquids and gases, adhesion, surface tension, viscosity, density and elasticity	
1.2	Structure of atom, molecules, elements and compound	
1.3	Electricity: Definition and types, Therapeutic uses. Basic physics of construction, Working	
1.4	Importance of currents in treatment	
1.5	Static Electricity: Production of electric charge, Characteristic of a charged body	
1.6	Characteristics of lines of forces. Potential energy and factors on which it depends. Potential difference and EMF	
1.7	Current Electricity: Units of Electricity: farad, Volt, Ampere, Coulomb, Watt	
1.8	Condensers: Definition, principle, Types- construction and working, capacity & uses	
1.9	Magnetism: Definition. Properties of magnets, Electromagnetic induction, Transmission by contact, Magnetic field and magnetic forces, Magnetic effects of an electric field	
1.10	Conductors, Insulators, Potential difference, Resistance and intensity	
1.11	Ohm's law and its application to DC and AC currents, Fuse: construction, working and application	
1.12	Transmission of electrical energy through solids, liquids, gases and vacuum	
1.13	Rectifying Devices-Thermionic valves, Semiconductors, Transistors, Amplifiers, transducer and Oscillator circuits	
1.14	Display devices and indicators-analogue and digital	
1.15	Transformer: Definition, Types, Principle, Construction, Eddy current, working uses	
1.16	Chokes: Principle, Construction and working, Uses	
2	**Effects of Current Electricity**	**14 Hours**
2.1	Chemical effects- ions and electrolytes, ionization, Production of an EMF by chemical actions	
2.2	Ionization: Principles, effects of various technique of medical ionization	
2.3	Electromagnetic Induction	

2.4	Electromagnetic spectrum	
3	**Electrical Supply**	**8 Hours**
3.1	Brief outline of main supply of electric current	
3.2	Dangers-short circuit, electric shocks: Micro/ Macro shocks	
3.3	Precaution-safety devices, earthing, fuses etc.	
3.4	First aid and initial management of electric shock	
3.5	Burns: electrical & chemical burns, prevention and management	
4	**Various agents**	**10 Hours**
4.1	Thermal agents: Physical Principles of cold, Superficial and deep heat	
4.2	Ultrasound: Physical Principles of Sound	
4.3	Electro- magnetic Radiation: Physical Principles and their Relevance to Physiotherapy Practice	
4.4	Electric Currents: Physical Principles and their Relevance to Physiotherapy Practice	

Course Outcomes (COs):

At the end of the course, the students will be able to

CO1	Explain fundamental principles of physics related to electricity production, its transmission
CO2	Explain the production, physiological and therapeutic effects Biophysics, principles, therapeutic uses, indications, contra-indications electrical stimulation agents
CO3	Demonstrate competencies in operational skills of equipment and patient preparation and techniques of application of electrical stimulation agents

Recommended Text Books:

1. Physics - Foundation & frontiers by George Cramow & John M. Cleveland
2. Fundamentals of Biomedical Physics by Akil Saiyed & Babita Saiyed

Recommended Reference Books:

1. Physics of the life sciences by Jay Newman. 2008
2. University physics for the physical and life sciences by Philip R. Kesten and David L. Tauck. First Edition, W. H. Freeman and Company. 2012

CO-PO-PSO Matrix:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3	PS04	PSO5
CO1	2	2	1	1	1	2	1	1	1	1	1	1	2	1	1	1	1
CO2	3	3	2	2	2	3	2	1	2	1	2	2	3	2	2	2	2
CO3	3	3	3	2	3	3	2	2	3	2	2	3	3	3	3	3	2

CHARUTAR VIDYA MANDAL UNIVERSITY

FACULTY OF PHYSIOTHERAPY

RITA A. PATEL INSTITUTE OF PHYSIOTHERAPY

BPT - Semester IV

Course Code: BPT – 125

Course Title: Electrotherapy

Course Credit Hours:

Hrs. / Wk			Credits			Marks		Total Marks
L	P	T	L	P	T	Theory	Practical	
4	10	14	4	5	9	100	100	200

Course Outline: In this course the student will learn the Principles, Techniques, Effects, Indication, Contra-Indication and the dosage parameter for various indications of electro therapeutic modalities in the restoration of physical function. The objective of this course is that student will be able to list the indications, contra indications, dosages of electro therapy modalities, demonstrates the different techniques, and describe their effects on various conditions.

Sr No	Title of the Unit	Minimum number of Hours
1.	Low frequency Currents	58
2.	Electrodiagnosis	52
3.	Medium Frequency Currents	45
4.	Thermo & Actinotherapy (High Frequency Currents)	56
5.	Superficial heating Modalities	55

Total hours (Theory): 76 Hrs

Total hours (Practical): 190 Hrs

Total hours: 266 Hrs

Unit Sr No	Course Content	Hours of Teaching
1	**Low frequency Currents**	**58 Hours**
1.1	Basic types of current a. Direct Current: types, physiological &therapeutic effects b. Alternating Current	
1.2	Types of Current used in Therapeutics a. Modified D.C i. Faradic Current ii. Galvanic Current b. Modified A.C i. Sinusoidal Current ii. Diadynamic Current	
1.3	Faradic Current: Definition, Modifications, Techniques of Application of Individual, Muscle and Group Muscle stimulation, Physiological & Therapeutic effects of Faradic Current, Precautions, Indications & Contra-Indications, Dangers	
1.4	Galvanic Current: Definition, Modifications, Physiological & Therapeutic effects of Galvanic Current, Indications & Contra-Indications, Dangers, Effect of interrupted galvanic current on normally innervated and denervated muscles and partially denervated muscles	
1.5	Sinusoidal Current & Diadynamic Current in Brief	
1.6	HVPGS – Parameters & its uses	
1.7	Ionization / Iontophoresis: Techniques of Application of Iontophoresis, Indications, Selection of Current, commonly used Ions (Drugs) for pain, hyperhydrosis, would healing.	
1.8	Cathodal / Anodal galvanism	
1.9	Applied Physiology: Special senses - Vision, taste, hearing, vestibular, Olfaction	
1.10	Micro Current & Macro Current	
1.11	Types of Electrical Stimulators a. NMES- Construction component b. Neuro muscular diagnostic stimulator- construction component c. Components and working Principles	
1.12	Principles of Application: Electrode tissue interface, Tissue Impedance, Types of Electrodes, Size & Placement of Electrode – Water bath, Unipolar, Bi-polar, Electrode coupling, Current flow in tissues, Lowering of Skin Resistance	

1.13	Nerve Muscle Physiology: Action Potential, Resting membrane potential, Propagation of Action Potential, Motor unit, synapse, Accommodation, Stimulation of Healthy Muscle, Stimulation of Denervated Muscle, and Stimulation for Tissue Repair	
1.14	TENS: Define TENS, Types of TENS, Conventional TENS, Acupuncture TENS, Burst TENS, Brief & Intense TENS, Modulated TENS. Types of Electrodes & Placement of Electrodes, Dosage parameters, Physiological & Therapeutic effects, Indications & Contraindications	
1.15	Pain: Define Pain, Theories of Pain (Outline only), Pain Gate Control theory in detail [2 Hours]	
1.16	Electrical stimulation for the muscles supplied by the peripheral nerves	
1.17	Faradism under Pressure for UL and LL	
2	**Electrodiagnosis**	**52 Hours**
2.1	FG Test	
2.2	SD Curve: Methods of Plotting SD Curve, Apparatus selection, Characters of Normally innervated Muscle, Characters of Partially Denervated Muscle, Characters of Completely denervated Muscle, Chronaxie & Rheobase	
2.3	Nerve conduction velocity studies	
2.4	EMG: Construction of EMG equipment	
2.5	Bio-feedback	
2.6	Plotting of SD curve with chronaxie and rheobase	
2.7	Demonstrate FG test	
3	**Medium Frequency Currents**	**45 Hours**
3.1	Interferential Therapy: Define IFT, Principle of Production of IFT, Static Interference System, Dynamic Interference system, Dosage Parameters for IFT, Electrode placement in IFT, Physiological & Therapeutic effects, Indications & Contraindications	
3.2	Russian Current	
3.3	Rebox type Current	
3.4	Demonstrate treatment method using IFT for various regions	
4	**Thermo & Actinotherapy (High Frequency Currents)**	**56 Hours**

4.1	Electro Magnetic Spectrum
4.2	SWD: Define short wave, Frequency & Wavelength of SWD, Principle of Production of SWD, Circuit diagram & Production of SWD, Methods of Heat Production by SWD treatment, Types of SWD Electrode, Placement & Spacing of Electrodes, Tuning, Testing of SWD Apparatus, Physiological & Therapeutic effects, Indications & Contraindications, Dangers, Dosage parameters
4.3	Pulsed Electro Magnetic Energy: Principles, Production & Parameters of PEME, Uses of PEME
4.4	Micro Wave Diathermy: Define Microwave, Wave length & Frequency, Production of MW, Applicators, Dosage Parameters, Physiological & Therapeutic effects, Indications & Contraindications, Dangers of MWD [2 Hours]
4.5	Ultrasound: Define Ultrasound, Frequency, Piezo Electric effects: Direct, Reverse, Production of US, Treatment Dosage parameters: Continuous& Pulsed mode, Intensity, US Fields: Near field, Far field, Half value distance, Attenuation, Coupling Media, Thermal effects, Non-thermal effects, Principles & Application of US: Direct contact, Water bag, Water bath, Solid sterile gel pack method for wound. Uses of US, Indications & Contraindications, Dangers of Ultrasound. Phonophoresis: Define Phonophoresis, Methods of application, commonly used drugs, Uses, Dosages of US [8 Hours]
4.6	IRR: Define IRR, wavelength & parameters, Types of IR generators, Production of IR, Physiological & Therapeutic effects, Duration & frequency of treatment, Indication & Contraindication [2 Hours]
4.7	UVR: Define UVR, Types of UVR, UVR generators: High pressure mercury vapour lamp, Water cooled mercury vapour lamp, Kromayer lamp, fluorescent tube, Theraktin tunnel, PUVA apparatus. Physiological & Therapeutic effects. Sensitizers & Filters. Test dosage calculation. Calculation of E1, E2, E3, E4 doses, Indications, contraindications, Dangers, Dosages for different therapeutic effects, Distance in UVR lamp [8 Hours]
4.8	LASER: Define LASER. Types of LASER, Principles of Production. Production of LASER by various methods, Methods of application of LASER, Dosage of LASER, Physiological & Therapeutic effects of LASER, Safety precautions of LASER, Classifications of LASER, Energy density & power density [8 Hours]
4.9	Application of Ultrasound for different regions-various methods of application

4.10	Demonstrate treatment techniques using SWD, IRR and Microwave diathermy	
4.11	Demonstrate the technique of UVR exposure for various conditions – calculation of test dose	
4.12	Calculation of dosage and technique of application of LASER	
5	**Superficial heating Modalities**	**55 Hours**
5.1	Wax Therapy: Principle of Wax Therapy application – latent Heat, Composition of Wax Bath Therapy unit, Methods of application of Wax, Physiological & Therapeutic effects, Indications & Contraindication, Dangers	
5.2	Contrast Bath: Methods of application, Therapeutic uses, Indications & Contraindications	
5.3	Physiology of Age	
5.4	Moist Heat Therapy: Hydro collator packs – in brief, Methods of applications, Therapeutic uses, Indications & Contraindications	
5.5	Cyclotherm: Principles of production, Therapeutic uses, Indications & Contraindications	
5.6	Fluidotherapy: Construction, Method of application, Therapeutic uses, Indications & Contraindications	
5.7	Whirl Pool Bath: Construction, Method of Application, Therapeutic Uses, Indications & Contraindications	
5.8	Magnetic Stimulation, Principles, Therapeutic uses, Indications & contraindication	
5.9	Cryotherapy: Define- Cryotherapy, Principle- Latent heat of fusion, Physiological & Therapeutics effects, Techniques of Applications, Indications & Contraindications, Dangers, Methods of application with dosages	
5.10	Technique of treatment and application of Hydrocollator packs, cryotherapy, contrast bath, wax therapy	
5.11	Demonstrate the treatment method using whirl pool bath	

Course Outcomes (COs):

At the end of the course, the students will be able to

CO1	Discuss theories of pain and its implications to physiotherapy clinical decision making
CO2	Explain the production, physiological and therapeutic effects of electro physical agents
CO3	Discuss the indications, contraindications and precautions to be taken while applying

	electro physical agents
CO4	Demonstrate competencies in applying (selection, dosage calculation, progression) electro physical agents
CO5	Demonstrate competencies in preparing and implementing evidence based electro physical agents' protocol for movement impairments under supervision
CO6	Demonstrate abilities to document the dosage and progression as per the prescribed format
CO7	Demonstrate competencies in communicating to the stakeholders effectively

Recommended Text Books:

1. Electrotherapy Explained: Principle and Practice, Low and Reed, Butterworth Heinemann
2. Claytons Electrotherapy -Kitchen and Basin
3. Principles and Practice of Electrotherapy -Kahn Church hill Livingstone

Recommended Reference Books:

1. Therapeutic Heat and Cold Lehman- Williams and Wilkins
2. Electrotherapy: Clinics in Physical therapy- Wolf Churchill Livingstone

CO-PO-PSO Matrix

	PO1	**PO2**	**PO3**	**PO4**	**PO5**	**PO6**	**PO7**	**PO8**	**PO9**	**PO 10**	**PO 11**	**PO 12**	**PSO1**	**PSO2**	**PSO3**	**PS 04**	**PSO5**
CO1	3	3	3	3	3	3	3	2	2	2	3	2	2	2	2	2	3
CO2	3	3	3	3	3	3	2	3	2	2	2	3	3	2	2	2	3
CO3	3	3	2	3	3	2	3	2	2	3	2	3	3	3	3	3	3
CO4	3	3	3	2	2	3	2	3	2	2	2	3	3	3	3	3	3
CO5	3	3	3	2	3	2	3	3	2	2	2	3	3	3	3	3	3
CO6	3	3	2	3	3	3	3	3	2	3	3	3	3	3	2	3	3
CO7	2	3	2	2	3	3	2	2	3	2	2	3	2	2	3	3	2

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FACULTY OF PHYSIOTHERAPY

RITA A. PATEL INSTITUTE OF PHYSIOTHERAPY

BPT - Semester IV

Course Code: BPT – 126

Course Title: Medical / Physiotherapy Law and Ethics

Course Credit Hours:

Hrs. / Wk			Credits			Marks		Total Marks
L	P	T	L	P	T	Theory	Practical	
2	-	2	2	-	2	50	-	50

Course Outline: This course educates students on the legal, ethical, and management aspects of healthcare, focusing on their importance in patient care. It addresses challenges faced by healthcare professionals due to evolving medical, legal, and moral frameworks. The course emphasizes medical and physiotherapy ethics to improve patient care and resolve ethical dilemmas. It also covers legal obligations for practitioners and teaches management principles to ensure quality care and successful, self-sustaining practices, preparing students to be compassionate practitioners and successful entrepreneurs.

Sr No	Title of the Unit	Minimum number of Hours
1.	Introduction and Definition of Physiotherapy Law and ethics	15
2.	Medicolegal Aspects of Law and Ethics	12
3.	Physiotherapy Law and Ethics	11

Total hours (Theory): 38 Hrs

Total hours (Practical): 00 Hrs

Total hours: 38 Hrs

Unit Sr No	Course Content	Hours of Teaching
1	**Introduction and Definition of Physiotherapy Law and ethics**	**15 Hours**
1.1	Medical ethics versus medical law - Definition - Goal - Scope	
1.2	Introduction to Code of conduct	
1.3	Basic principles of medical ethics – Confidentiality	
1.4	Malpractice and negligence - Rational and irrational drug therapy	
1.5	Autonomy and informed consent - Right of patients	
1.6	Care of the terminally ill- Euthanasia	
1.7	Organ transplantation	
2	**Medicolegal Aspects of Law and Ethics**	**12 Hours**
2.1	Medico legal aspects of medical records – Medico legal case and type- Records and document related to MLC - ownership of medical records - Confidentiality Privilege communication - Release of medical information - Unauthorized disclosure - retention of medical records - other various aspects	
2.2	Medical diagnosis versus physiotherapy diagnosis	
2.3	Professional Indemnity insurance policy	
2.4	Development of standardized protocol to avoid near miss or sentinel events	
3	**Physiotherapy Law and Ethics**	**11 Hours**
3.1	Code of ethics for physiotherapists	
3.2	Obtaining an informed consent	
3.3	Biomedical ethical principles	
3.4	Illusion and hallucination: different types	
3.5	Ethics documents for physiotherapists	
3.6	Laws affecting physiotherapy practice	

Course Outcomes (COs):

At the end of the course, the students will be able to

CO1	Compare and contrast the concept of morality ethics and legality and discuss the ethical issues pertaining to physiotherapy practice
CO2	Discuss the concept of professionalism and code of professional ethics and describe the salient features of national and international code of ethics related to health sciences as well as discuss the legal frame work of physiotherapy practice
CO3	Discuss the principles, elements of management and its relevance to physiotherapy practice
CO4	Discuss the principles and methods of quality control and skill necessary to run a physiotherapy clinic as entrepreneur

Recommended Text Books:

1. M Francis Medical Ethics jay pee new Delhi
2. Raja K Davis F Ethical Issues: Perspectives for the Physiotherapists pee brothers new Delhi
3. Percival, T. (2014). Medical ethics. Cambridge University Press
4. Dunn, M., & Hope, T. (2018), Medical ethics: a very short introduction. Oxford University Press

Recommended Reference Books:

1. Hébert, P. C., & Rosen, W. (2009). Doing right: a practical guide to ethics for
2. Medical trainees and physicians (p. 352). Don Mills, ON: Oxford University Press American Medical Association, & New York Academy of Medicine. (1848)
3. Code of medical ethics. H. Ludwig & Company

CO-PO-PSO Matrix:

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

CHARUTAR VIDYA MANDAL UNIVERSITY

FACULTY OF PHYSIOTHERAPY

RITA A. PATEL INSTITUTE OF PHYSIOTHERAPY

BPT - Semester IV

Course Code: BPT – 127

Course Title: Clinical Education

Course Credit Hours:

Hrs. / Wk			Credits			Marks		Total Marks
L	P	T	L	P	T	Theory	Practical	
-	6	6	-	2	2	-	100	100

Course Outline: The objective of this foundation course is to sensitize potential learners with essential knowledge; this will lay a sound foundation for their learning across the under-graduate program and across their career. Innovative teaching methods should be used to ensure the attention of a student and make them more receptive such as group activities, interactive forum, role plays, and clinical bed-side demonstrations.

- Students will be posted in rotation in the physiotherapy OPDs and various wards of hospitals attached with the college. The students will observe the process of providing physiotherapy care for the patients. They may assist the clinical staff as well in executing non clinical aspects of service delivery. Each student shall maintain a case portfolio / diary to record the various activities performed during clinical posting. This diary should be presented before the final exam and the grade should be awarded by the college.

Course Outcomes (COs):

At the end of the course, the students will be able to

CO1	Take history of various clinical conditions affecting human beings
CO2	Communicate effectively with patients, family/carers, multidisciplinary team and colleagues
CO3	Assess pain, joint integrity, mobility, ligament laxity and accessory movement

CO-PO-PSO Matrix:

CO	**PO1**	**PO2**	**PO3**	**PO4**	**PO5**	**PO6**	**PO7**	**PO8**	**PO9**	**PO 10**	**PO 11**	**PO 12**	**PSO1**	**PSO2**	**PSO3**	**PS 04**	**PSO5**
CO1	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
CO2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
CO3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
CO4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3