

Subject Code: 1PT1010104	Subject Title: EXERCISE THERAPY- I
Pre-requisite Subject	- NONE -

Objectives of course:

1. Understand the basic mechanical principles and effect of exercise, therapeutic modality in the restoration of physical function.
2. Describe and acquire the skills of application and demonstration of the use of various tools of the therapeutic gymnasium and various starting and derived positions.
3. Describe the physiological and therapeutic effect of various movements and demonstrate in various anatomical planes.
4. Acquire the skills of application of various massage manipulations and describe the Physiological effects, therapeutic uses, merits – demerits of the same.
5. Explain and acquire the skill of relaxation.

Learning outcomes:

At the end of the course the candidate will be able to

1. Explain the basic mechanical principles and effect of exercise
2. Describe and acquire the skills of application and demonstration of the use of various tools.
3. Describe the physiological and therapeutic effect of various movements.
4. Demonstrate various anatomical planes.
5. Acquire the skills of application of various massage manipulations.
6. Demonstrate and acquire the skill of relaxation.

Teaching Scheme (Hours)			Evaluation Scheme (Marks)					
Lecture	Practical	Total	Theory(T)		Practical(P)		Total Marks	
			University Assessment	Continuous Assessment	University Assessment	Continuous Assessment	Theory	Practical
175	100	275	80	20	80	20	100	100

Subject Contents			
EXERCISE THERAPY – 1			
Sr. No.	Topic	Total Hours	Weight (%)
1	Introduction to exercise therapy.		

2	Physiological effects and uses of exercise.		
3	Pharmacological aspects of exercises.		
4	Use of apparatus in exercise therapy.		
5	Fundamental starting positions, derived positions-effects and uses, pelvis tilt & Muscle work for all positions		
6	Joint movement - terminology and range axes and planes of movement, levers, measurement of joint movements, goniometry, types of goniometer, bubble and gravity goniometer.		
7	Causes of restriction of range of movement - Distinguish between skin, muscles, capsular contractures.		
8	Classification of movements		
9	Active movements - Definition, types, techniques, effects and uses. Passive movements- Definition, types, techniques of relaxed passive movements and uses, comparison of both movements.		
10	Group work-Criteria of selection of patients, advantages and disadvantages of group class exercises.		
11	Home exercises - trick movements.		
12	Suspension therapy - definitions of suspension and point of suspension, types of suspension, pulleys and use of pulleys in suspension therapy, application of suspension therapy either to increase the joint range or to increase muscle power.		
13	Breathing - Mechanism of breathing (normal), Muscles of respiration, changes in thoracic cage during process of respiration, types of breathing exercises, training programme - diaphragmatic and segmental breathing.		

14	Pursed lip breathing & Glossopharangel Breathing - significance.		
15	Crutch walking - Types of crutch walking, Use of parallel bars in pre-crutch walking stage, balance exercises, phase of walking, gait training, group of muscles responsible during Crutch walking.		
16	Progression in crutch walking, measurement of crutches, other walking aids canes, walkers, tripods other types of crutches, crutch - walking on even surface, slopes, climbing up the stair case.		
17	Measurement of limb length, methods of measurements.		
18	Application of resistance to develop endurance and power, progression of exercises, angle of pull, types of muscle work, exercises - free resisted, assisted - use of gadget apparatus. Resisted Exercises - Techniques and types of resistance, SET system (Heavy resisted exercises) Oxford method, Delorme method, Macqueen's method.		
19	Free Exercises - Classification, technique, effects of free exercises - application for shoulder, neck, hip and knee joints, techniques of mobilization for stiff joints.		
20	Maintenance of record-volume, range of motion, resistance, limb length.		
SOFT TISSUE MANIPULATION-MASSAGE MANIPULATION			
Sr. No.	Topic	Total Hours	Weight (%)
1	Introduction-brief history, definition, classification.		
2	Physiological effects and therapeutic uses, contra - indications..		
3	Preparation of patient, basic points to be considered before and during massage		
4	Technique, effects and uses of each manipulation and contra-indications.		

5	Specific effects of certain manipulations.		
6	Massage for arm, leg, neck and upper back face.		
7	Massage for oedema, scar, tendinitis, fibrosis (tight fascia).		
8	Practice of soft tissue manipulation in subjects.		
9	Mobilization of soft tissues, joints and fluid collection.		
Total Hours		275	