



மனோன்மணியம் சுந்தரனார் பல்கலைக்கழகம்
MANONMANIAM SUNDARANAR UNIVERSITY

**SYLLABUS FOR DIPLOMA IN PHYSICAL REHABILITATION PROGRAM
OFFERED THROUGH DIRECTORATE OF VOCATIONAL EDUCATION (COMMUNITY
COLLEGES AND VOCATIONAL SKILL DEVELOPMENT CENTRES) FROM 2019 –
2020**



கல்விசார் நிலைக்குழுக் கூட்டம்

**MEETING OF THE STANDING COMMITTEE ON
ACADEMIC AFFAIRS HELD ON WEDNESDAY
THE 22nd JANUARY 2020**

DIPLOMA IN PHYSICAL REHABILITATION

உடல் நல மறு சீரமைப்பு பட்டயம்

SCHEME OF EXAMINATION

Subject Code	Title of the Course	Credit	Hrs	Passing Minimum
Semester I				
C19PR11/E19PR01	Anatomy and Physiology	6	90	40/100
C19PR12/E19PR02	Exercise Therapy and Massage	6	90	40/100
C19PR13/E19PR03	Electro Therapy	6	90	40/100
C19CE10/E19CE10	Communicative English	6	90	40/100
C19PRP1/E19PRP1	Practical I-Procedures I	4	120	40/100
Semester II				
C19PR21/E19PR04	Rehabilitation	6	90	40/100
C19PR22/E19PR05	Community and Psychological Rehabilitation	6	90	40/100
C19LS23/E19LS05	Life Skill	6	90	40/100
C19PRP2/E19PRP2	Practical II-Procedures II	4	120	40/100
C19PRPW/E19PRPW	Project/Internship	10	150	40/100

Eligibility for admission: Pass in 12th std examination conducted by the Govt. of Tamil Nadu Board of Secondary Education, Government of Tamil Nadu or any other equivalent examination.

Examination: Passing Minimum for each Course is 40%. Classification will be done on the basis of percentage marks of the total marks obtained in all the Courses and as given below:

- 40% but less than 50% - Third class
 50% but less than 60% - Second class
 60% and above - First class

Theory Paper

Internal Marks-25

External Marks-75

Syllabus**First Semester**

- Course-I : Anatomy and Physiology
 Course-II : Exercise Therapy and Massage
 Course-III : Electro Therapy
 Course-IV : Communicative English
 Course-V : Practical I-Procedures I

Second Semester

- Course-VI : Rehabilitation
 Course-VII : Community and Psychological Rehabilitation
 Course-VIII : Life Skill
 Course-IX : Practical II-Procedures II
 Course-X : Project/Internship

***(Semester Pattern for Community College Only)**

Preamble

After completion of these course students will be able to acquire knowledge of the normal structure of various human body systems and acquire knowledge of the normal physiological functions of various human body system.

(C19PR12/E19PR02) COURSE II

EXERCISE THERAPY AND MASSAGE

Preamble

After completion of these course students will be able to acquire knowledge of the principles, technique and effects of exercise as a therapeutic modality in the restoration of physical function and massage techniques.

Objectives:

- To study various starting position and suspension
- To understand the development of various body movements
- To apply therapeutical exercises to improve range of motions in the joints and muscles
- To train and study breathing and manipulation techniques
- To study various system of massage applications on different body parts

UNIT –I Starting Position and Suspension 18 Hrs

Starting positions: muscle work, effect and uses and derived positions - pelvic tilt – Standing, kneeling, sitting, lying, hanging - suspension: definition, types, uses and therapeutic applications

UNIT – II Movements 18 Hrs

Classification of movements - active movements and passive movements: definition, types, techniques, effects and uses - causes of restriction of range of movement - progressive restricted exercise - home exercises - trick movements.

UNIT –III Therapeutical exercises 18 Hrs

Muscle grading, re-education of muscle, joint mobility, goniometry, crutch walking: types, use of parallel bars in pre-crutch walking stage, balance exercises, phase of walking, gang training group of muscles responsible during crutch walking - suspension therapy, hydro therapy - bed rest complications and relaxation exercises

UNIT-IV Breathing Exercise and Massage 18 Hrs

Breathing exercise: types, postural drainage, Mechanism of breathing (normal), muscles of respiration, changes in thoracic cage during process of respiration - Massage: history of massage, the various manipulation technique, uses and Contra indications

UNIT-V Application of massage 18 Hrs

Massages for upper limb, massages for lower limb, massage for back, massage for the face.

Reference books:

- Manual of massage and measurements - Edith M Prosser
- Principles of exercise therapy - Denagareliner
- Practical exercise therapy - Hollis
- Exercise therapy - Denacardiner
- Massage - Manual Of Massage And Measurements

(C19PR13/E19PR03) COURSE III

ELECTRO THERAPY

Preamble

After completion of these course students will be able to acquire knowledge of the principles, technique and effects of electrotherapy as a therapeutic modality in the restoration of physical function.

Objectives:

- To understand the knowledge of electro-physics
- To study the application of electrotherapy diagnostic
- To study and understand the muscle-nerve stimulations
- To understand about the methods of application of Tens and Traction
- To understand the therapeutical treatment on physiological effects

UNIT – I **Introductory Physics**

18 Hrs

Electricity, static electricity, current electricity, magnetism, moving coil millimeter: construction working and uses, galvanometer

UNIT –II **Electrotherapy**

18 Hrs

Voltmeter, transformer, chokes, electric valves or thermionic valves, metal valve rectifiers – ionization – iontophoresis - electro diagnostic procedures

UNIT –III **Muscle-Nerve Stimulation**

18 Hrs

Low & High Frequency -Interrupted galvanic current, Effects of Interrupts galvanic current on innervated and enervated muscles, characteristic stimulating current.

UNIT –IV **Tens and Traction**

18 Hrs

Tens: definition, basic indications and contra indications – Traction: ICT, IPT. Paraffin wax and moist heat: method, indications and contra indications

UNIT –V **Therapeutical effects**

18 Hrs

Cryo therapy and Hydrotherapy – physiological effects and uses, techniques of applications, methods, indications and contra indications

Reference book:

- Electrotherapy – CLAYTONS
- Clayton's Electrotherapy
- Electrotherapy Explained: Principles and practice by Low and Reed

Course IV

(C19CE10/E19CE10) COMMUNICATIVE ENGLISH

1) **Basic Grammar:**

- a. Review of grammar
- b. Remedial study of grammar
- c. Simple sentence
- d. Word passive voice etc.

2) **Bubbling Vocabulary:**

- a. Synonyms
- b. Antonyms
- c. One – work Institution

3) **Reading and Understanding English**

- a. Comprehension passage
- b. Précis – writing
- c. Developing a story from hints.

4) **Writing English**

- a. Writing Business letters.
- b. Paragraph writing
- c. Essay writing
- d. Dialogue writing

5) **Speaking English**

- a. Expressions used under different circumstances
- b. Phonetics

References:

- V.H.Baskaran – “English Made Easy”
- V.H.Baskaran – “English Composition Made Easy” (Shakespeare Institute of English Studies, Chennai)
- N.Krishnaswamy – “Teaching English Grammar” (T.R.Publication, Chennai)
- “Life Skill” – P.Ravi, S.Prabakar and T.Tamzil Chelvam, M.S.University, Tirunelveli.

**(C19PRP1/E19PRP1) COURSE V
PRACTICAL I- PROCEDURES I**

Preamble

After completion of these course students will be able to acquire knowledge of the care and techniques to handling the patient.

Objectives:

- To understand the knowledge of patient receiving
- To understand the knowledge of collection of materials
- To study and understand the treatment preparation
- To learn and apply the skin resistance techniques
- To study about the introducing the patients

1) Receiving and Collection of Past History

RECEIVING THE PATIENT: Good morning sir, please be seated. You have come to the Electrotherapy Department. I am the physiotherapist who is going to treat you. Please wait sir until I go through you case sheet.

GOING THROUGH THE CASE SHEET: 1. Name, 2. Sex, 3. Age, 4. Cause of illness, 5. Duration of illness, 6. Any previous treatment, 7. Any improvement due to the previous treatment, 8. Present condition on admission, 9. Side to be treated

2) Collection of Materials

Skin resistance lowering tray

Tray b) Bowl with water and cotton swabs c) Soap d) Mackintosh e) Kidney tray f) Towel

Treatment tray

a) Tray b) Bowl with water and cotton swabs c) Salt d) Petroleum jelly e) Leads f) Lint pads g) Electrode and straps h) Jageonet piece i) Mackintosh j) Towel k) pillows as per to necessary l) Other miscellaneous

3) Treatment Preparation

9% of saline solution is prepared by adding a pinch salt to the bowl of water. Wetting the treatment site using saline provides it would have been loss while lowering the skin resistance. Knobs are tuned to zero.

Plugs and wires are checked for any break of insulations. Check whether the cables are adherent.

4) Skin Resistance Techniques

SKIN RESISTANCE THERAPIST:

The therapist should position himself in such a way that is free to reach the machine and the patient and should take care that doesn't get enlarged among wires.

SKIN RESISTANCE LOWERING:

The part to be treated is wiped with soap and it is water wiped with towel. Before washing, the mackintosh and a towel is unrolled the part to be treated. This is done because: Dirty and oily substance such as sebum which off resistance to the flow of current are removed by the action of soap. Electricity is conducted at minimum intensity.

5) Instructing the Patient

I am going to start the treatment, tell me when you feel the current. You will feel a prickling sensation, when current passes. Inform me immediately whenever

There is a burning sensation

Please don't touch me or anything around you

Don't pull out the lead or shake the past.

These instructions are given to the patients.

To avoid electrolytic burns

To avoid electric shocks

SEMESTER II
(C19PR21/E19PR04) COURSE VI
REHABILITATION

Preamble

After completion of these course students will be able to acquire knowledge to understand their role in the management of the disability within the rehabilitation team.

Objectives:

- To understand the knowledge of Rehabilitation theory
- To understand the Rehabilitation of conditions
- To apply therapeutical treatment preparation
- To apply Rehabilitation management techniques
- To apply physical Rehabilitation techniques

UNIT – I Introduction of Rehabilitation 18 Hrs

Rehabilitation: definition, team work involved in rehabilitation, role of each team members, various methods of approach in rehabilitation, impairment, disability and handicap

UNIT –II Rehabilitation of conditions 18 Hrs

Therapeutic exercise technique - physical dysfunction and management of disabilities: spinal cord injury, poliomyelitis, brain injury, arthritic conditions, muscular dystrophy, Hansen's disease, peripheral nerve lesions, fracture disease and chronic cardio - respiratory dysfunction, congenital conditions and osteoporosis

UNIT –III Therapeutical 18 Hrs

Occupational Therapy - Speech Therapy and Hearing Aids – Orthotics - Amputation and Prosthetics

UNIT –IV Rehabilitation management 18 Hrs

Mobility aids: types and functions - activities of daily living, pain path ways

UNIT –V Physical Rehabilitation 18 Hrs

Rehabilitation of burns, fractures, common pain syndromes

Reference book:

- Textbook of Rehabilitation – Sunder
- Cash's Text Book of Orthopaedics & Rheumatology for Physiotherapist.
- Essential of Orthopaedics and Applied Physiotherapy – Jayant Joshi, Prakash Kotwal

COURSE VII

(C19PR22/E19PR05)COMMUNITY AND PSYCHOLOGICAL REHABILITATION

Preamble

After completion of these course students will be able to acquire knowledge of psychological rehabilitation and community based rehabilitation, and also the importance of psychological intervention in the field of disability.

Objectives:

- To acquire the knowledge of Psychological Rehabilitation
- To understand the various concepts and theory
- To study family and disability
- To understand the community issues
- To apply personality development

UNIT – I: Introduction

18 Hrs

Psychological rehabilitation: Need, Importance, Characteristics, advantage and Disadvantage - Community based rehabilitation and Institutional based rehabilitation: characters, advantages and disadvantages.

UNIT – II: Concepts and Theory

18 Hrs

Role of rehabilitation professional, models of CBR - Concept of impairment, disability and handicap, models of disability, theories and models of adaptation to disability and adaptation processes, ways of coping with disability, concept of quality of life

UNIT – III: Family and Disability

18 Hrs

Impact of disability on family, family care and burden, role of family on coping, adaptation and integration, needs of families

UNIT – IV: Community Issues

18 Hrs

Evaluation of community needs, rehabilitation in community, social counseling, training in daily living skills, community awareness. Community initiatives to remove barriers that affect exclusion, initiating advocacy movement, developing holistic,

UNIT – V: Personality

18 Hrs

Personality and life span development of persons with disabilities, personality traits and coping styles.

Reference books:

- Current Topics in Rehabilitation Psychology: Grune & Straton
- Textbook Of Rehabilitation – SUNDER.
- Alexis Waitman & Suzanne Conboy – Hill, 1992. Psychotherapy and Mental Handicap. SAGE Publications, New Delhi.
- Franks and Wilson Annual Review of behaviour therapy Theory and practices, Vol.5, 1997.
- Rosenberg, M.S., Wilson R., Maheady, L., (2004) Educating Children with Behaviour Disorder. London: Sage Publications.
- Palmer, S, and Woolf, R, (2000). Interpretative and electric counselling and psychotherapy, London: Sage.

Course VIII
(C19LS23/E19LS05)Life Skill

I Life Coping or adjustment

- (a) External and internal influence in one's life
- (b) Process of coping or adjustment
- (c) Coping with physical change and sexuality
- (d) Coping with stress, shyness, fear, anger far live and criticism.

II Attitude

- a) Attitude
- b) Self acceptance, self – esteem and self actualization
- c) Positive thinking

III Problem Solving

- a) Goal Setting
- b) Decision Making
- c) Time Management and stress Management.

IV Computers

- (a) Introduction to Computers
- (b) M.S.Office
- (c) Power Point

V Internet

- (a) Introduction to internet
- (b) E – mail
- (c) Browsing

References:

- 1) Life Skill Programme course I & II by Dr. Xavier Alphona MCRDCE Publications. R.K.Mutt Road, Chennai – 28
- 2) ஆளுமை பண்பு வளர்த்தல் மற்றும் தகவல் தொடர்பு by M.Selvaraj Community College,Palayamkottai
- 3) “Life Skill” –P.Ravi, S.Prabahar & T.Tamil Chelvam, M.S. University, Tirunelveli

(C19PRP2/E19PRP2)COURSE IX

PRACTICAL II-PROCEDURES II

Preamble

After completion of these course students will be able to acquire knowledge of the care, application of treatment and techniques for exercises management.

Objectives:

- To understand the practical knowledge in the position of patient
- To apply the curb bandage methodology
- To study and apply reading of pulse
- To study and apply the electro therapy treatments
- To apply exercise therapy treatment

1) Position of Patient

The patient is made to lie supine on the wooden coach; the limb to be treated is kept elevated using pillows. So gravity assists draining oedema.

2) Use of Curb Bandage

Curb bandage is tied over the entire limb, with decreasing pressure from the foot to the high. Curb bandaging machine draining the oedematous fluid.

3) Reading of Pulse

PULSE: Triangular.

4) Placing of the Electrodes

In difference: As sacral plexus

Active: At head of fibula where the lateral popliteal nerve

Places above the medial condyle over tibial nerve, low frequency.

Electrotherapy:

Stimulation for all muscles in the anterior & posterior aspect of both

Upper and lower limb

Facial stimulation

S D curver

Faiadic foot bath

Fardism under pressure

IFT (inter/Fertinal therapy)

5) TENS

Exercise therapy

- 1) Massage – both upper and lower limb, back massage, facial massage.
- 2) Stretching -T.A stretching
 - Adductor stretching
 - Biceps stretching
 - Triceps stretching
 - Hamstring stretching
- 3) Passive movement for both upper & lower limbs

Course X

(C19PRPW/E19PRPW)PROJECT/INTERNSHIP

Need compulsory internship/projects related to the course.