

SYLLABUS

ON

DIPLOMA IN REHABILITATION THERAPY

Rehabilitation Council of India

(Statutory Body under the Ministry of Social Justice and Empowerment)

B-22, Qutub Institutional Area,

New Delhi – 110 016

DIPLOMA IN REHABILITATION THERAOY

(Course Curriculum)

1.0 INTRODUCTION

The curriculum for the 2 -1/2 years "Diploma in Rehabilitation Therapy", has been drafted with the overall objective to prepare a suitable manpower in the field of rehabilitation, who can provide the rehabilitation therapy at the district level which is very much lacking at the present, as well as act as a first level referral point for the grass-root level. In addition it can also take care of the training programmes of community worker at the grass-root level.

Since the student has to be imparted knowledge about the various common disabilities viz Locomotor, Speech, Hear¥1g, Visual, Mental retardation, Learning and Multiple disabilities, it may be necessary at the operational level to involve a number of institutes dealing with the respective disability groups, especially, in terms of practical training and internship. Therefore, the course curriculum has been framed in modular form.

It is commonly assumed that there are 210 working days in a year including the days earmarked for admissions and examinations. It is presumed that there will be minimum of 180 days for theory & practical teaching in a year and presuming 6 working hours a day, the total number of working hours in a year will be - [180 x 6 = 1080 hours]

Based on this, the 2 -1/2 years course of "Diploma in Rehabilitation Therapy has been divided into 5 modules of 90 days (540 hours) each. The distribution of working hours for the theory and practical is given below:

<u>Module</u> <u>Hrs.</u>	<u>Days X Hrs.</u>	<u>Total</u>
1. Core paper	90 x 6	= 540 hrs.
2. Locomotor disability	90 x 6	= 540 hrs.
3. Speech & hearing disability	50 x 6	= 300 hrs.
Visual disability	40 x 6	= 240 hrs. = 540 hrs.
4. Mental retardation & Learning disability	30 x 6	= 180 hrs.
Multiple disability	60 x 6	= 360 hrs. = 540 hrs.
5. Internship		
▪ Locomotor disability	30 x 6	= 180 hrs.
▪ Hearing & speech disability	20 x 6	= 120 hrs.
▪ Visual disability	10 x 6	= 60 hrs.
▪ Mental Retardation & Learning disability	16 x 6	= 96 hrs.
▪ Multiple disability	14 x 6	= 84 hrs. = 540 hrs.

2.0 OVERALL OBJECTIVES

An undergraduate diploma course in Rehabilitation Therapy designed to impart student knowledge and skills rehabilitation therapy so that he can deliver rehabilitation therapy to the persons with vari common disabilities.

The knowledge so imparted will make the candidates suitable to deliver the services at the middle level (district level and act as first level training & referral rehabilitated professional for the grass

root/primary rehabilitation cart.

2.1 GENERAL OBJECTIVES

2.1.1

To promote understanding of situation and needs of people with disabilities in rural as well as urban and slum areas and for persons with disabilities marginalised by poverty.

2.1.2

To develop an understanding to prevent disabilities involvement of the families, community, the PWD and the existing health infrastructure.

2.1.3

To understand and develop skills for imparting rehabilitation therapy viz. by use of physical agents and physical principles use of functional aids, principles and practice on speech training and sign language, training in use of ambulatory aids and other appliances, mobility training and Braille system, psycho educational assessment and programme planning, special education principles for development during strategies, management of problem behaviour self care and independence training, employment opportunities, CBR concepts and approach and working with the parents, families and communities.

2.1.4

To develop necessary skills for training of volunteers in rehabilitation on therapy especially in the context of CBR.

2.2

LEARNING OBJECTIVES (Skills acquisition)

2.2.1

DISABILITY & RELATED ISSUES

To learn about situation and needs of people with disabilities, political issues, empowerment of people with disabilities, social and economic status of PWD, attitudes to disability, legislation & disability participatory development. Disability types and causes, prognosis; identification of disabilities - early signs, screening tests, prevention of disabilities - health education / first aid & safety, prevention of secondary disability concept of health delivery system and rehabilitation models.

2.2.2

TECHNICAL SKILLS

To learn basic anatomy, physiology, pathology, biomechanics, concept of growth & development, clinical assessment, goals/task analysis, training for positioning and support, exercise therapy, thermo therapy, mobility at home, public transport and in community, pre & post operative evaluation & therapeutic skills, self care and independence training at home, school, work place and community, assistive devices, splints, braces, orthoses and prostheses.

- Assessment, training maintenance & follow up

Psychological phenomena, their measurement, guidance, counselling & rehabilitation.

Visual problems - Functional assessment, education, teaching & use of Braille, Orientation

& mobility skills, role of special school, interaction in crafts & sports.

Communication Problems - Identification & assessment, instrument for testing & their use, interpretation of audiogram, hearing aids, assistive devices & ear moulds, auditory training, language & speech therapy.

2.2.3

PERSONAL SKILLS

To develop skills in working with parents of disabled families & community, use of learning/training materials, esp, CBR manuals, basic counselling & interpersonal skills, develop problems solving skills, developing & promoting human values, working with other sectoral agencies, net working skills, basic level skills with local bodies, referrals promoting, educational, vocational & social integration.

2.2.4

SERVICE SYSTEMS

Rehabilitation systems - IBR & CBR concepts & approaches information gathering, surveys, basic record keeping, report writing, devising individual plans & evaluating progress, supporting, training & supervising community level workers, Referrals & coordination with other agencies. Monitoring & evaluation - reviews & discharges.

3.0.

ELIGIBILITY FOR ADMISSION

10+2 (PCB) with a minimum of 50% marks from a recognised board like CBSE or equivalent. A separate 6 months module may be developed for Multi Rehabilitation Worker (MRW) to bring them at par with rehabilitation therapist.

Candidates to be selected by holding a written examination to test their knowledge & aptitude test by interview, to be held on all India basis/or by the institution.

4.0

AGE FOR ADMISSION

A minimum of 17 years at the time of applying for admission

5.0

MEDIUM OF TEACHING

English & regional language

6.0

OTHER CONSIDERATIONS

- A minimum of 10-15 candidates per batch will be admitted by the implementing agency.
- Preference should be given to candidates belonging to the region, where the implementing agency is located.
- Reservations for special categories should apply as per government rules.

7.0.

EXAMINATION

The objective of the examination is to assess the knowledge and skills of the candidate in the practice of rehabilitation therapy. The knowledge is evaluated by theory examination. The skill is evaluated by practical & clinical examination.

48% weightage will be given to theory and 60% to practical marks.

The examinations will be conducted at the end of each modules/semester.

7.1

EXAMINATION SCHEME:

MODULE -1

CORE COURSE

Theory	Marks	Practical	Marks	Total
2 hours	40	3 hours (one)	180	
2 hours	40			
2 hours	40			
	<u>120</u>		<u>(120+180)</u>	<u>300</u>

- PAPER -1 - HUMAN BODY & HUMAN DEVELOPMENT
 PAPER -II - PSYCHOLOGY, SOCIOLOGY & COUNSELLING
 PAPER-III - DISABILITY & REHABILITATION

MODULE -II

LOCOMOTOR DISABILITY

Theory	Marks	Practical	Marks	Total
2 hours	40	3 hours (one)	180	
2 hours	40			
2 hours	40			
	<u>120</u>		<u>(120+180)</u>	<u>300</u>

- PAPER -I - INTRODUCTION TO DISABILITY
 PAPER-II - PHYSICAL AGENTS & EXERCISE THERAPY
 PAPER-III - THERAPEUTIC ACTIVITIES, FUNCTIONAL TRAINING AID & APPLIANCES.

MODULE -III

- HEARING, SPEECH & VISUAL IMPAIRMENTS

Theory	Marks	Practical	Marks	Total
2 hours	40	3 hours -I	120	
2 hours	40	1 hours - II	60	
2 hours	40			
	<u>120</u>		<u>180</u>	<u>300</u>

PAPER –I	- AUDIOLOGY & AURAL REHABILITATION
PAPER –II	- LANGUAGE & SPEECH
PAPER –III	- VISUAL IMPAIRMENTS & REHABILITATION
PRACTICAL –I	- HEARING & SPEECH DISABILITY
PRACTICAL –II	- VISUAL DISABILITY

MODULE -IV **MENTAL RETARDATION, LEARNING DISABILITY & MULTIPLE DISABILITY**

Theory	Marks	Practical	Marks	Total
2 hours	40	1 hours -I	60	
2 hours	40			
2 hours	40	2 hours-II	120	
	<u>120</u>		<u>180</u>	<u>300</u>

PAPER –I	- REHABILITATION OF PERSONS WITH MENTAL RETARDATION
PAPER –II	- REHABILITATION THERAPY IN CERBRAL PALSY & OTHER NEUROLOGICAL CONDITIONS-I
PAPER –III	REHABILITATION THERPAY IN CERBRAL PALSY & OTHER NEUROLOGICAL CONDISTIIONS-II
PRACTICAL-I	- MENTAL RETARDATION & LEARNING DISABILITY
PRACTICAL-II	- CEREBRAL PALSY & NEUROLOGICAL CONDITIONS

8.0 ATTENDANCE

No candidate shall be permitted to appear in anyone of the module/semester of the course,

- I. he/she has attended the course in the subject for the prescribed period in the affiliated institution recognised by the R.C.I., and produces necessary certificate of study, and satisfactory conduct certificate from Head of the Institution.
- II. A candidate is required to put in minimum 80% of attendance in both theory & practical separately in each module/semester, before being allowed to appear in the examination.

9.0 QUALIFYING MARKS

A minimum of 40% in each theory paper with an aggregate of 50% in all theory papers for each

module/semester.

The passing minimum for each of the practicals may be prescribed as 50%.

The institution may adopt a combination of internal and external system or external system only for evaluation.

The student who fails in one paper may be allowed to appear in the particular paper only for a maximum of 2 times, if the student fails to pass the examination after 2 appearances, he will be expected to appear in all the papers again.

10.0

TEACHING FACULTY

1.	Course Coordinator	1 (one)	Full Time	Preferably physiatrist or expert in a disability field
2.	Course co-coordinator	1 (one) for each disability	Full Time	Lecturer level
3.	Teachers & Trainers	2 (two) for each disability	Full Time	For theory & practical teaching in each disability
4.	Visiting faculty	(as per requirement)	Part time	For teaching basis Medical science & other Topics

11.0

LIBRARY

A library equipped with basic books on various disabilities, basic sciences, social, psychological and vocational rehabilitation should be a pre-requisite.

In addition, useful video on DPR will be preferred.

12.0

EQUIPMENTS

Basic diagnostic & therapeutic equipment's related to disabilities taught should be available.

13.0

INTERNSHIP

Every candidate admitted {to Diploma Course in Rehabilitation Therapy shall compulsorily undergo internship training as per schedule given at 1.0, after he has passed in all the papers of all the 4 modules/semesters. The Heads of the Institutions shall issue a certificate of successful completion of internship to each candidate after satisfying that the candidate has completed the training programme and has acquired the skills to function independently.

14.0

AWARD OF DIPLOMA IN REHABILITATION THERAPY

The Diploma in Rehabilitation Therapy shall be awarded by the admitting institution after the candidate has qualified in all the modules/semester and completed the internship successfully.

15.0

CURRICULUM

Detailed curriculum is appended at Annexure-I

16.0 MISCELLANEOUS

Before the RCI grants recognition to the institute for starting the course & the Institute itself should ensure that ample job opportunities exist or provision made thereof in order to stop wastage of time, money & talent.

DIPLOMA IN REHABILITATION THERAPY

MODULE-1	- CORE COURSE
INSTRUCTION HOURS	- 540
THEORY/PRACTICAL RATIO	- 40:60
PAPER -I	- HUMAN BODY & HUMAN DEVELOPMENT
PAPER-II	- PSYCHOLOGY, SOCIOLOGY & COUSELLING
PAPER-III	- DISABILITY & REHABILITATION

OBJECTIVES:

- a. To give basic knowledge about structure & function of human body necessary in practice of rehabilitation therapy.
- b. To give basic information on the principles of human growth and development and orl psychological processes, their normal and maladaptive aspects.
- c. To demonstrate application of principles of psychology, tools used in the rehabilitative process.
- d. To give information on the sociological concepts, community resources, and benefits available from the governments and Guidance & counselling skills.
- e. To give information on the genesis of disability, its types, causes, prevention & identification and rehabilitation approaches.

CORE PAPERS:

- I. Human Body & Human Development.
- II. Psychology, Sociology & Counseling.
- III. Disability & Rehabilitation.

CORE PAPER-I
HUMAN BODY & HUMAN DEVELOPMENT (180 HOURS)

UNIT -1 (60 Hours)

- General introduction to various systems of body & their basic functions.
- Terminology, movements, planes & relationships of body parts.
- Cell, its structure function, types of cells.
- Cell, tissue, organs, & system.
- Gross structure & function of the central nervous system & peripheral nervous system.
- Gross structure & function of musculo-skeletal system.
- Structure & function of muscle tissue
- Classification of joints & their structure
- Osteomyology of upper limb
- Osteomyology of lower limb
- Osteomyology of trunk

UNIT-2 (60 Hours)

- The respiratory system
- The Cardiovascular system
- The Gastro-intestinal system
- The endocrinal glands
- The genito urinary system
- Reproductive & genetic system
- Normal posture
- Gravity and the body
- The neural control of posture, balance & muscle tone
- Motor learning and feedback mechanisms
- Calcium and phosphorus metabolism
- Effect of exercise on heart and lungs
- The anatomy and physiology of the eye.
- The anatomy and physiology of the speech mechanism
- The anatomy & physiology of the hearing system

UNIT -3 (60 Hours)

- Introduction to human development
- Gross motor development
 - Principles of development, milestones
 - Primitive reflexes, and automatic reactions
 - Righting & equilibrium reflexes
 - Development of mature reflexes & Voluntary control
- Fine Motor development
 - Principles of development, milestones
 - Types of grasp
 - Importance of trunk and head control in fine motor development
- The development of drawing and writing

- Developmental milestones of daily living skills
 - Bladder & bowel control
 - Prefesding & feeding
 - Dressing
 - Bathing
 - Grooming
 - Cognitive development
 - Milestones, theories of development
 - Perceptual development
 - Body image, spatial relation-form perception, figure ground perception, motor basis of learning
 - Importance of intersensory integration, perceptual process.
 - Generalization
 - Speech, language & communication
 - Development & relationship to vegetative functions. I:)
- Language mediation for motor development
- Social & emotional development
 - Infancy, childhood & adolescent
 - Development of play in 0-6 years.
 - Types of play and its importance
 - Visual development
 - Eye movements, tracking, accommodation & convergence, acuity
 - Development of hearing.

PRACTICAL

1. Demonstration of parts of body and bony landmark on the surface.
2. Identification of cells and basic tissues.
3. Skeletal System, Identification of bones and joint.
4. Demonstration of interior of Thorax with organs in situ.
5. Demonstration of respiratory system and pleurae.
6. Demonstration of heart and great vessels.
7. Demonstration and identification of various organs within the abdomen.
8. Demonstration of spleen, pancreas and parts of urinary system.
9. Male genital system.
10. Female genital system
11. Various reproductive organs.
12. Central nervous system, spinal level and peripheral level nervous system
13. Surface anatomy of important organs.
14. Phenomenon of fatigue in human beings.
15. Determination of mechanical efficiency during different grades of exercise.
16. Study of cardio-respiratory changes during exercise.
17. Blood pressure, pulse rate and effect of exercise.
18. TPR charts.

Note: PRACTICAL MAY BE BY

1. Demonstration of specimens
2. Drawing diagrams and labeling
3. Demonstration of models and skeletons.

CORE PAPER-II
PSYCHOLOGY, SOCIOLOGY & COUNSELLING (180 HOURS)

UNIT -1 : PSYCHOLOGY (60 Hours)

- Nature, definition & scope of psychology
- Sensation, attention, perception & motivation
- Concept & meaning of intelligence, individual differences
- Theories of intelligence, measurement of intelligence & aptitude testing
- Meaning, concept & dimensions of personality
- Theories and assessment of personality
- Frustration & conflict, adjustment mechanisms
- Problem behaviour, its identification & management

UNIT -2 : SOCIOLOGY (60 Hours)

- Definition, nature & scope of sociology.
- Rural society, society & community, process of socialization,
- Social system
- Social groups: meaning & classification
- The rural & urban community of India and their characteristics, changes and developmental projects
- Social change, social disorganisation
- Social welfare planning in India
- Traditional & modern society
- Developing and promoting human values
- Sociology of disability
- Working with families in the community & family
- Understanding parents & family perspectives
- Assessment of needs and resources of parents & family as a whole
- The problem solving process
- Techniques of working with families (training, counselling etc.)
- Developing communication skills
- Parent training programmes
- Involvement of siblings & peer group

UNIT -3 GUIDANCE & COUNSELLING (60 Hours)

- Nature, meaning & scope of guidance & counselling
- Role of home & type school in guidance & counselling
- Techniques of guidance & counselling with reference to disabled
- Vocational guidance for disabled.
- Individual problems and stress management through counselling

PRACTICAL

1. Assessment techniques
 - Case history taking & interview
 - Observations
 - Measurement of intelligence & scholastic achievements

- Measurement of perceptual functioning
 - Measurement of personality
 - Measurement of aptitude
 - Measurement of problem behaviour
2. (5) field assignments, visiting different communities/organisations & reporting.
 3. Placement with Medical Social Worker (MSW) & Psychologist and to observe guidance and counselling techniques & reporting.

CORE PAPER-III
DISABILITY & REHABILITATION (180 HOURS)

UNIT -1 : PREVENTIVE & COMMUNITY MEDICINE (60 Hours)

- Concept of health, health & illness
- Contributing factors influencing health
- Personal & environmental hygiene & health
- Atmospheric pollution, effect on health prevention & control
- Concept of preventive medicine & community health
- Public health organisations & services in India
- Food & nutrition

UNIT -2 DISABILITY & RELATED ISSUES (60 Hours)

- Disability, attitudes to disability, misconceptions, beliefs etc.
- Situation, reciprocal attitudes/needs of persons with disability
- Issues related to rural/urban slums
- Socio-economic status of disabled persons: empowerment in Indian & Global contexts
- Participatory development
- The disabled person, family dynamics and the community
- Main streaming of the disabled
- Access, services, special schemes, public facilities, concessions etc.
- Legislation and Disability.

UNIT -3 CAUSES & PREVENTION OF IMPAIRMENTS (60 Hours)

- Disability: genesis, magnitude, futuristic trends
- Disability types and causes
- Disability limitation & prevention
- Preventable disabilities: strategies & approaches
- Early detection & intervention
- Rehabilitation: Definition, aims, objectives & Philosophy of rehabilitation
- Rehabilitation approaches and systems
- Different models of service delivery
- Community based rehabilitation concepts & approaches
- Information gathering: surveys, record keeping, report writing community resources
- Devising individual programme, plans & evaluating progress
- Referrals, and coordination with other agencies.
- Monitoring needs, reviews, discharges, communication, participative evaluation

PRACTICAL

1. Preparation of charts & posters related to preventive medicine
2. Information gathering related to benefits & concessions available to disabled and the methods of obtaining them (Prepare check list of same)
3. Preparation of charts & material relating to disability prevention & rehabilitation
4. (5) visits to institutions dealing with different disabilities.

DIPLOMA IN REHABILITATION THERAPY

MODULE -11	- LOCOMOTOR DISABILITY
INSTRUCTION HOURS	- 540 Hours
THEORY / PRACTICAL RATIO	- 40:60
PAPER –I	- INTRODUCTION TO LOCOMOTOR DISABILITY <ul style="list-style-type: none">• General consideration• Medical & Surgical condition• Disability process• Biomechanics & Kinesiology
PART – II	- PHYSICAL AGENTS & EXERCISE THERAPY
PAPER – II	- THERAPEUTIC ACTIVITIES, FUNCTIONAL TRAINING, AIDS & APPLIANCES

PAPER-I

INTRODUCTION TO LOCOMOTOR DISABILITY

(GENERAL CONSIDERATION, MEDICAL & SURGICAL CONDITIONS, DISABILITY PROCESS, BIOMECHANIC & KINESIOLOGY)

OBJECTIVES

After studying this paper students will be able to :

1. Narrate the magnitude of the problem of persons with locomotor disability/disorders affecting locomotor system.
2. Describe the causative factors for locomotor disability/disorders - Medical conditions
3. Describe the causative factors for locomotor disability/disorders - Surgical conditions.
4. Demonstrate ability to use assessment devices for persons locomotor disability.
5. Describe the possible preventive measures to be undertaken to minimise the incidence of locomotor disabilities.

COURSE CONTENT

UNIT-I

(12 Hours)

INTRODUCTION, DISABILITY PROCESS & CAUSATIVE FACTORS.

- 1.1 Magnitude of problem of locomotor disability.
- 1.2 Disability genesis congenital and acquired causes.
- 1.3 Disease/disorder, pathology, sign, symptoms, diagnosis, prognosis, morbidity and mortality.

UNIT -2

GENERAL MEDICAL CONDITIONS

(60 Hours)

- 2.1 Neurology - Elementary description of the following neurological conditions, hemiplegia, paraplegia, quadriplegia, polio myelitis, parkinsonism, ataxi, peripheral nerve lesions" Myopathy, epilepsy.
- 2.2 Pediatrics - Normal milestones of development, immunisation, congenital deformities, cerebral palsy, nutritional. deficiencies.
- 2.3 Skin - Leprosy.
- 2.4 Medical conditions - tuberculosis, pneumonia, asthma, bronchitis, common peripheral vascular disorders, heart disease, hypertension, cancer, aging & degenerative disorders, osteoporosis, connective tissue disorder, rheumatoid arthritis, ankylosing spondylitis etc.
- 2.5 Psychiatric conditions - Anxiety, Mood disturbances on Schizophrenia, obsessive compulsive neurosis. organic psychosis.

UNIT -3

SURGICAL CONDITIONS

(60 Hours)

General Surgery/Plastic Surgery

- 3.1 Abdominal surgery - scope of various procedure
- 3.2 Shock
- 3.3 Cardiothoracic surgery
- 3.4 Burns, complications and scope of corrective surgery
- 3.5 Amputation, levels, types & complications

- 3.6 Surgery in gynecology
- 3.7 Head Injuries
- 3.8 Congenital deformities CTEV, AMC, scoliosis, torticollis
- 3.9 Clinical features of fracture, dislocation and soft tissue injury, General principles of treatment
- 3.10 Spinal injuries
- 3.11 Bone and joint infections
- 3.12 Back pain, neck pain
- 3.13 Peripheral nerve injuries
- 3.14 Degenerative problems of joints
- 3.15 Limb anomalies and spinabifida
- 3.16 Principles of operative treatment
- 3.17 Residual polio - problems & management

UNIT 4

(60 Hours)

- 4.1 Biomechanics
- 4.2 Kinesiology
- 4.3 Human locomotion
- 4.4 Grading of muscle power by manual muscle testing
- 4.5 Goniometric measurement of ROM of joint
- 4.6 Raw material for aids & appliances, leather, fabrics, plaster of paris, wood, plastis.

UNIT -5 PREVENTION & ACCESSIBILITY

(12 Hours)

- 5.1 General concept, levels, application and effect of prevention \ 57)
- 5.2 Immunisaion schedule
- 5.3 Environmental modification in family neighbourhood and workplace as preventive method.

PRACTICALS/DEMONSTRATION

- Survey of a village-detection of persons with disabilities.
- Demonstration of rehabilitating needs of locomotor disability persons.
- Visit to a immunisation centre.
- Writing health talks and making posters on Locomotor disability problems.
- Observing A.V. programmes and other mass media health education programme.
- Preparation of charts and posters
 - Definition of Rehabilitation, its aims & objectives.
 - Disability process-impairment - functional limitation-disability - rehabilitation
 - Team approach
 - Practical demonstration of various surgical and medical conditions
 - Visit to physiotherapy and observation of its working in terms of man, material and machinery.
 - Observation of various techniques used in using physical agents and exercises therapy.
 - Visit to occupational therapy and observation of working.
 - Observation of various therapeutic activity and functional training methods. .
 - Visit to prosthetic and orthotics workshop to see its functioning.
 - To see various aids & appliances and learn about various materials being used to fabricate supportive and substitutive appliances.
 - To learn measuring ROM of various joints.
 - To learn manual muscle charting
 - Normal human locomotion various parameters, demonstration of few cases of gait deviation

PAPER-II
PHYSICAL AGENTS AND EXERCISE THERAPY

OBJECTIVES

After studying this paper, the students will be able to

1. learn assessment of locomotor disability.
2. learn and understand basic principles related to use of physical agents and exercise therapy in the management of locomotor disability and disorders & disability.
3. Give exercise therapy and use simple procedures in management and rehabilitation of locomotor disorders/disability.
4. Carry out simple electrotherapy and hydrotherapy procedures and assist qualified personnel in carrying out sophisticated procedures.
5. To maintain and take care of rehabilitation equipment's and materials.

UNIT -1 **EXERCISE THERAPY** **(60 Hours)**

- 1.1 History and introduction of exercise therapy.
- 1.2 Mechanical principles as applied to human body.
- 1.3 Classification and definition of movements active, passive and resisted.
- 1.4 Progressive resisted exercises
- 1.5 Reeducation and coordination exercise.
- 1.6 Hydrotherapy
- 1.7 Breathing exercises
- 1.8 Physiological effect of massage and manipulation-techniques
- 1.9 Equipments required to improve joint mobility and muscle power.
- 1.10 Suspension therapy, traction

UNIT-2 **HEAT AND COLD THERAPY** **(24 Hours)**

- 2.1 Physiological effects of heat and cold
- 2.2 Heat as a physical agent-waxbath, infra-red rays, heating pads. Indications/contraindication.
- 2.3 Cold as a physical agents, techniques Indications/contraindication

UNIT -3 **ELECTRO THERAPY** **(60 Hours)**

- 3.1 Low frequency currents, Physiological effects on muscle and nerves.
- 3.2 Faradic and galvanic current, indications/contraindication SD curve
- 3.3 TENS, mechanism of pain relief and technique of application
- 3.4 Shortwave diathermy, principles technique of application, indications and contra indications
- 3.5 Ultrasonic therapy - principles, technique of application, indications and contraindications.

UNIT-4 **(24 Hours)**

USE OF PHYSICAL AGENTS IN LOCOMOTOR DISORDERS/ DISABILITY

- 4.1 Normal and abnormal posture, causes and exercises for restoring normal posture.
- 4.2 Pathological gait, gait training
- 4.3 Pain management

4.4 Exercise therapy and physical agents in various medical and surgical conditions.

UNIT -5 MAINTENANCE & PREPARATION(12 Hours)

- 5.1 Description and application of various apparatus used in exercise therapy.
- 5.2 Knowledge of electric connection, their checking and repair.
- 5.3 Materials used for making pads, and electrodes.
- 5.4 Preparation of patient and equipments.
- 5.5 Complications and safety measures for the patient during electrotherapy.

PRACTICALS

Exercise Therapy

- Demonstration of active, passive and resisted movements.
- Equipments required to improve joints mobility and muscle power.
- Breathing exercises
- Normal and abnormal postures
- Demonstration and description of equipments like parallel bars, dumbles, springs, wllakers, static cycle medicine ball, sand bags, weights and pulley, tilt table etc.
- Walking aids, demonstration and practice of gait training.
- Demonstration of special therapies like suspension therapy, hydrotherapy and relaxation, traction
- Transfer activities
- Demonstration and practice of massage
- Demonstration of exercises for prevention/treatment of contractive and deformities.
- Demonstration of exercises on hemiplegic, CP, Polio, quadriplegia, paraplegia ataxia, myopathy, peripheral nerve injury etc.
- Demonstration of postural drainage.
- Demonstration of exercises in osteoarthritis, peri-arthritis, rheumatoid arthritis, ankylosis, spondylids', CS, LS, etc.
- Field visit for practical training to rural rehabilitation set up, bums and plastic department, leprosy centre, etc.

Electrotherapy, Heat and Cold Therapy

- Identification of components of electric equipment.
- Procedures of tidying and cleaning of equipment
- Safety and precautions measures of burn, shock, giddiness.
- Preparation of patient and equipment for electrotherapy.
- Maintenance of machines, wires, pads and electrodes.
- Observation of working of electrical equipments and assisting in electro diagnostic and therapeutic procedures.
- Procedure of testing sensation of patient before starting heat therapy.
- Maintenance/Cleaning and application on patients of hot packs cold packs, contrast bath and wax bath, IRR US therapy, SWD, TENS, Faradic and galvanic amounts.

- (2) Dressing
 - Personal hygiene
 - Ambulatory activities
 - Home making and child care
 - Miscellaneous activities
- Visit to home or work place of disabled and work out modification.
 - Assist in management of different physical disabilities
 - Field visit for practical work in general hospitals, leprosy homes, rural rehabilitation centre, mental hospital, school for mental retardation, school for special education (Spastic children)
 - Practical exposure in burns/pastic surgery, orthopaedics, rehabilitation, paediatrics, medical & surgical wards
 - Therapeutic activities and functional training in various medical and surgical conditions and locomotor disability cases.
 - Sample splints making
 - Demonstration of process of fabrication of various supportive and substitutive appliances. Observe the process and record various stages in fabrication of
 - Above knee prostheses
 - Below knee prostheses
 - Above knee caliper
 - Below knee caliper

DIPLOAM IN REHABILITATION THERAPY

MODULE-III(A)	- AUDIOLOGY AND SPEECH
INSRUCTION HOURS	- 300 HOURS
THEORY / PRACTICAL RATIO	- 40 : 60
PAPER –I	- AUDIOLOGY A AURAL REHABILITAITON
PAPER-II	- LANGUAGE & SPEECH
PAPER –III	- VISUAL IMPAIRMENTS & REHABILITAITON

OBJECTIVES

- To equip the trainee in with basic principles of Audiology and Speech and its application therapy.
- To familiarise the trainee with the different Rehabilitation aid and appliances used in audiology and speech.
- To acquaint the trainee with the recent developments in the field of audiology and speech and their application.

COURSE CONTENTS

PAPER -1 AUDIOLOGY AND AURAL REHABILITATION

50 Hrs.

UNIT -1

(10 Hours)

Hearing mechanism

- 1.1 Anatomy of the Ear
- 1.2 How we hear.
- 1.3 Hearing loss; nature, causes and classification.
- 1.4 Aural hygiene and steps to prevent hearing impairment.Hearing mechanism

UNIT-2 Identification and assessment of Hearing

(20 Hours)

- 2.1 Behavioural responses to sound at various age range.
- 2.2 Informal Hearing tests (screening)
- 2.3 Early identification of hearing impairment.
- 2.4 Importance of early identification in rehabilitation process.
- 2.5 Different types of instruments used for testing hearing sensitivity.
- 2.6 What is an audiogram, how to obtain and interpret an audiogram.
- 2.7 Classification of hearing impairment according to degree of hearing loss.

UNIT -3 Hearing aids, Assistive devices and Ear moulds.

(10 Hours)

- 3.1 Hearing aid its parts and different types of hearing aids.
- 3.2 Different types of assistive and amplification devices.
- 3.3 Selecting a suitable hearing aid, its maintenance and care.
- 3.4 Ear moulds it importance and care.
- 3.5 Custom making of ear moulds.

UNIT -4

Auditory Training

(10 Hours)

- 4.1 Definition, need and importance of auditory training.
- 4.2 Steps in auditory training.
- 4.3 Factors like age of the child, type of hearing loss, intensity of stimuli.
- 4.4 Recording responses and progress.
- 4.5 Game and activities for auditory training (individual and group training.)

PAPER-II
LANGUAGE AND SPEECH

50 Hrs.

UNIT -1

Introduction to language

(15 Hours)

- 1.1 Definition nature and functions of language.
- 1.2 Definition, nature and scope of communication.
- 1.3 Modes of communication, (Aural, Oral, Finger Spelling, Sign and Sign Language, Cued Speech and Total Communication).
- 1.4 Biological and psychological foundation of language.
- 1.5 Effects of hearing impairment on language development.
- 1.6 Critical period and its importance in the language and speech development.

UNIT-2 Introduction of Speech

(15 Hours)

- 2.1 Definition, different parameters, concept and characteristics of normal speech.
- 2.2 Structure of speech organs, respiratory, articulatory and phonatory systems.
- 2.3 Stages of vocabulary, syntax semantics, and phonological development.
- 2.4 Classification of sounds (Vowels, consonants)
- 2.5 Place and manner of articulation.
- 2.6 Speech sound system of (Hindi) regional language.

UNIT -3 Language and Speech Therapy

(20 Hours)

- 3.1 Definition, concept of abnormal speech.
- 3.2 Classification of language and speech problems
- 3.3 Suprasegmental feature.
- 3.4 Evaluation of speech in terms of Voice, articulation, suprasegmental features.
- 3.5 Techniques of correcting different voice and speech problems.
- 3.6 Parent centred activities in developing and maintaining speech.
- 3.7 Different types of speech training aids.

UNIT -3 Language and Speech Therapy

(70 Hours)

- 3.1 Evolution of language and Speech using different test material.
- 3.2 Making plans for language and speech therapy.
- 3.3 Taking language and speech therapy sessions.
- 3.4 Preparation of material for language and speech therapy.

PRACTICAL TRAINING

(200 Hrs.)

PAPER -I

Unit -1: Hearing Mechanism

(20 Hrs.)

- 1.1 Observation of case history and recording.
- 1.2 Demonstration by charts, models, computer etc.
- 1.3 Preparation of charts.

Unit -2: Identification and Assessment of Hearing

(40 Hrs.)

- 2.1 Screening of school children
- 2.2 Identification of Hearing Impairment in Hospitals, Nursing Homes etc.
- 2.3 Pure Tone Audiometry, Plotting of audiogram, writing impressions.
- 2.4 Collecting information on technical specification of audiometers.

Unit -3: Hearing Aids, Assistive devices and Ear Moulds (40 Hrs.)

- 3.1 Hearing and trial
- 3.2 Making diagrams of different types of hearing aids and assistive devices.
- 3.3 Collecting information on technical specification of different hearing aids and assistive devices.

Unit-4 : Auditory Training (20 Hrs.)

- 4.1 Development of listening skills
- 4.2 Development of games and activities for auditory training.

PAPER –II

Unit –1: Introduction to Language

Unit -2: Introduction to Speech

(30 Hrs.)

- 2.1 Observation of case history and recording.
- 2.2 Demonstration by chart, models, computer etc.
- 2.3 Preparation of charts.

Unit-3 : Language and Speech Therapy

(70 Hrs.)

- 3.1 Evaluation of language and speech using different test material
- 3.2 Making plans for language and speech therapy.
- 3.3 Taking language and speech therapy sessions.
 - 3.4 Preparation of material for language and speech therapy

DIPLOMA IN REHABILITATION THERAPY

MODULE -III (B) : VISUAL IMPAIRMENT

INSTRUCTION HOURS : 240 HOURS

THEORY / PRACTICAL RATIO : 40: 60

PAPER-III : VISUAL IMPAIRMENTS & REHABILITATION

PRACTICAL TRAINING

(200 Hrs.)

PAPER-I

UNIT -1

Hearing Mechanism

(20 Hours)

- 1.1 Observation of case history and recording.
- 1.2 Demonstration by charts, models, computer etc.
- 1.3 Preparation of charts.

UNIT-2

Identification and Assessment of Hearing

(40 Hours)

- 2.1 Screening of school children.
- 2.2 Identification of Hearing Impairment in Hospitals, Nursing Homes etc.
- 2.3 Pure Tone Audiometry, Plotting of audigram, writing impressions.
- 2.4 Collecting information on technical specification of audiometers.
- 2.5

UNIT -3

(40 Hours)

Hearing Aids, Assistive devices and Ear Moulds.

- 3.1 Hearing aid trial.
- 3.2 Making diagrams, of different types of hearing aids and assistive devices.
- 3.3 Collecting information on technical specification of different hearing aids and assistive devices:

UNIT -4

Auditory Training

(20 Hours)

- 4.1 Development of listening skills
- 4.2 Development of games and activities for auditory training.

PAPER-II

UNIT -1

Introduction to Language.

UNIT -2

Introduction to Speech

(30 Hours)

- 2.1 Observation of case history and recording.
- 2.2 Demonstration by chart, models, computer etc.
- 2.3 Preparation of charts.

ANATOMY AND PHYSIOLOGY OF THE EYE

TOPIC

- | | | |
|----|------------------------------------|--------|
| a. | Structure of eye | 8 Hrs. |
| b. | Major causes of blindness in India | 8 Hrs. |
| c. | Common eye diseases | 8 Hrs. |

PREVENTION OF BLINDNESS

TOPIC

- | | | |
|----|---|---------|
| a. | Need for giving vitamin A to children | |
| b. | Simple hygiene. | 16 Hrs. |
| c. | Simple ways of preventing visual impairment | |

EDUCATION OF VISUALLY IMPAIRED CHILDREN

TOPIC

- | | | |
|----|-------------------------------|---------|
| a. | Teaching of bharti Braille | 40 Hrs. |
| b. | Use Braille Equipment | 24 Hrs. |
| c. | Use of Mathematical Equipment | 16 Hrs. |
| d. | Use of Magnifiers. | 16 Hrs. |

INTEGRATION

TOPIC

- | | | |
|----|-----------------------------------|---------|
| a. | Role of special school | 48 Hrs. |
| b. | Role of resource room. | |
| c. | Other support service. | |
| d. | Integration in Crafts and Sports. | |
| s. | | |

ORIENTATION AND MOBILITY

TOPIC

- | | | |
|----|--------------------------------------|--|
| a. | Precane skills | |
| b. | Use of the Long cane | |
| c. | The Human guide technique. | |
| d. | Picking up dropped objects. | |
| e. | Activities of daily living. | |
| f. | Sense training. | |
| g. | Mobility of persons with low vision. | |

REHABILITATION OF THE ELDERLY BLIND

TOPIC

- | | | |
|----|---|---------|
| a. | Independence at home | |
| b. | Recreation | 16 Hrs. |
| c. | Social interaction and community participation. | |

A total 240 hours may be devoted to the above topics.

DIPLOMA IN REHABILITATION THERAPY

MODULE-IV (A)	- MENTAL RETARDATION
INSTRUCTION HOURS	- 180 HOURS
THEORY / PRACTICAL RATIO	- 40:60
PAPER	- REHABILITATION OF PERSONS WITH MENTAL RETARDATION

OBJECTIVES

To impart information and first hand experience on

- Nature, causes and prevention of mental retardation and associated conditions.
- Special Education principles, techniques and strategies of teaching and training children / persons with Mental Retardation.
- Psycho-educational assessment and programme planning for individual and group of children with Mental Retardation.
- Class room management and organizational issues.
- Management of problem behaviour.

TOPICS (THEORY)

TOTAL

HOURS 70

UNIT -1

15 Hrs.

Mental Retardation - Nature and needs.

- Historical perspective.
- Concept of mental retardation.
- Definition-AAMR, WHO, ICD.
- Incidence and prevalence.
- Causes and prevention, prenatal, natal and post natal.
- Screening and identification of mental retardation.
- Classification of mental retardation - medical, psychological and educational.
- Associated conditions.
- Psycho - social problems of persons with M.R.
- Misconceptions and social practices.

UNIT -2

15 Hrs.

Assessment and Evaluation

- Concept, definition.
- Scope and purpose of assessment.
- Types of Assessment and Evaluation.
- Continuous and periodic assessment.
- Formative and summative assessment.
- Psychological, educational assessment.
- Functional, behavioural, clinical assessment.
- Problems and Implication of assessment and Evaluation with reference to teaching and training
- Assessment tools with special reference to Indian context.
- Interpretation of assessment results and programming.

UNIT -3

10 Hrs.

Special Education for Children with M.R.

- Historical perspective.

- Concept and definition of special education.
- Teaching learning principles, techniques and strategies for infants, pre-primary, secondary and pre-vocational levels of children I persons with mental retardation.

UNIT -4 **15 Hrs.**
Curriculum and Educational Intervention.

- Procedure for developing curriculum.
- Principles and purpose of curriculum development.
- Types and approaches of curriculum development.
- Individualized Educational programme.
- Group educational programme.
- Home Bound programme.
- Management of persons with severe, Profound and multiple handicap.
- Development of instructional material.
- Organization and administration of a special school.

UNIT-5 **15 Hrs.**

Problem Behaviour in Persons with Mental Retardation and its management.

- Behaviour Problems - nature and types.
- Behavioural assessment - identification, collecting baseline data, functional analysis of problem behaviour, package programme evaluation of change in problem behaviour.
- Approaches to behaviour modification - medical, social, psycho - analytical and behavioural. Behaviour modification - concept and definition.
- Behaviour modification techniques.

PRACTICAL (In Specialized paper MR) TOTAL HOURS -110

PARCTICALS **110 Hrs.**

UNIT -1 Special Education **45 Hrs.**

- Observe, Discuss and learn methods, tools and techniques for special education assessment and plan an I.E.P. with minimum three objectives in two children with mental retardation select or make teaching aids appropriate to the objectives.
- Implement the ProgramfP-e under supervision for one month (half an hour daily)
- Measure the progress and identify short comings.
- Plan and implement grouij lessons (Minimum 10 lessons with different group levels)
- Write report and submit for evaluation.

UNIT -2 Behaviour Modification **35 Hrs.**

- Observe, discuss and learn techniques of behaviour assessment.
- Identify two children /persons with mental retardation having behavioural problems.
- Working out behaviour management programme and implement the package. Submit the write up on the work done.

UNIT -3 Visits to Institutions for M.R **35 Hrs.**

- Visits 05 Institutions and submit the visit report.
- Collect addresses of centres working for persons with mental retardation in the region.

INTERNSHIP

(2 Weeks X 4 hrs. daily, approx. 40 hrs.)

Placement in a Special School! section in an integrate set up and carry out the assigned tasks like.

- I. Assessment of children referred to the centre.
- II. Working out home bound programme for children who could not be admitted to the centre,
and
- III. Following them up during the next week.

And submit the report duly signed by the incharge of the centre.

DIPLOMA IN REHABILITATION THERAPY

MODULE –IV (B)	- MULTIPLE DISABILITIES
INSTRUCTION HOURS	- 360 Hrs.
THEROY /PRACTICAL RATIO	- 40 : 60
PAPER-I	- Rehabilitation Therapy Cerebral Palsy and other Neurological Conditions –I
PAPER-II	- Rehabilitation Therapy in Cerebral Palsy and other Neurological condition

REHABILITATION THERAPY CEREBRAL PALSY AND OTHER NEUROLOGICAL CONDITIONS (360 HRS.)

INTRODUCTION (30 HRS. INCLUSIVE OF 15 Hrs. OF PRACTICAL INPUT)

1. To understand the magnitude and the problems of persons with multi-disability in India.
2. to be able to recognize various categories of multi-disability/neurological conditions
3. to be able to identify the need to refer for further diagnosis and prognosis.

Course Content

- 1.1 Issues related to the prevalence of multi-disability in urban and rural India magnitude and attitudes (2 hrs.)
- 1.2 Issues related to access to information services and technology (2 hrs.)
- 1.3 Specific needs of persons with multi-disability in relation to self, family and community (2 hrs.)
- 2.1 Types, causes, signs and symptoms of cerebral palsy and other neurological conditions (2 hrs.)
- 2.2 Life history of cerebral palsy and other neurological conditions (4 hrs.)
- 2.3 Specific developmental problems in cerebral palsy and other neurological conditions (4 hrs.)
- 2.4 History taking (4 hrs.)
- 3.1 Guidelines for referral (1 hrs.)

II NEEDS ASSESSMENT : PERSONS WITH DISABILITY, FAMILY AND COMMUNITY (28 HRS. INCLUSIVE OF 18 HRS. OF PRACTICAL INPUT)

Objectives:

1. To be able to assess the physical and functional ability level and associated problems of persons with disability.
2. To be able to interpret physical and functional problems affecting daily life of persons with disability and their families
3. To be able to assess family and community barriers and resources affecting the development of persons with disability
4. To be able to identify the need to refer for specialized assessment.

Course Content

- 1.1 Assessment of gross motor and fine motor level. (3 hrs)
- 1.2 Identification of functional and practical problems related to independent function in ADLs (2 hrs)
- 1.3 Identification of associated behaviour, sensory and health problems of multi disabled. (2 hrs)
- 1.4 Screening and assessment check lists. (3 hrs)
- 2.1 Identification of contractures and deformities (2 hrs)
- 2.2 Identification of abnormal postures and movement patterns. (2 hrs)
- 2.3 Assessment of mobility potential and mobility needs of persons with disability. (2 hrs)
- 2.4 Assessment of management related problems of family. (2 hrs)

- | | | |
|-----|--|---------|
| 3.1 | Methods to assess family problems and resources. | (2 hrs) |
| 3.2 | Methods to identify environmental and social barriers. | (2 hrs) |
| 4.1 | Comprehensive interpretative summary of needs assessments. | (2 hrs) |
| 4.2 | Guidelines for referrals. | (2 hrs) |

III HOLISTIC APPROACHES TO WORKING WITH PERSONS WITH MULTI DISABILITY (57 Hrs INCLUSIVE OF 40 Hrs. OF PRACTICAL INPUT)

1. To develop problem solving approaches to working with persons with multi disability.
2. To be able to devise and implement individual programme plans and evaluate progress.
3. To be able to implement specialized level programmes.
4. To be able to identify need to refer for specialized intervention

Course Content

- | | | |
|-------|---|----------|
| 1.1 | Philosophy of management | (2 hrs.) |
| 1.2 | Prioritising needs, goal setting and action plans | (3 hrs.) |
| 2.1 | <u>Specific intervention strategies - persons with disability</u> | |
| 2.1.1 | Early stimulation / play | (2 hrs.) |
| 2.1.2 | Handling and transfer techniques | (6 hrs.) |
| 2.1.3 | Positioning and support - postural aids and postural management | (6 hrs.) |
| 2.1.4 | Basic exercises - indication and types | (4 hrs.) |
| 2.1.5 | Mobility aids and training | (3 hrs.) |
| 2.1.6 | Pre and post operative management | (3 hrs.) |
| 2.1.7 | Self - care and independence training | (8 hrs.) |
| 2.1.8 | Orthotic aids and assistive devices - types and use in Cerebral Palsy and other Neurological conditions
(4 hrs.) | |
| 2.2 | <u>Specific intervention strategies - family and community</u> | |
| 2.2.1 | Parent education and training | (2 hrs.) |
| 2.2.2 | Family support | (2 hrs.) |
| 2.2.3 | Accessing community support systems | (2 hrs.) |
| 2.2.4 | Selection of intervention techniques for holistic individual programme plan | (3 hrs.) |
| 2.3 | Basic record keeping and report writing | (2 hrs.) |
| 2.4 | Monitoring and reviewing progress | (2 hrs.) |
| 3.1 | Interpretation and application of prescribed specialised programmes | (2 hrs.) |
| 4.1 | Guidelines for refer | (1 hrs.) |

Practicals

Case Study	:	35 hours
Project placement	:	68 hours
Referral kits	:	5 hours

INTERSHIP – 14 DAYS 84 Hrs. APPROX.

Objective

To be able to independently assess and prepare appropriate, holistic intervention plans across three levels – Persons with Disability, family and community, for at least 3 individuals with varying variables including age, sex severity of disability and economic background.