

# SYLLABUS

CERTIFICATE IN REHABILITATION THERAPY (LOCOMOTOR)

**Norms, Regulations & Course Content**

**REHABILITATION COUNCIL OF INDIA**

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

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# 1. INTRODUCTION

## 1.1 Rationale

The majority of disabled population are in rural areas. It is still difficult to find like minded therapists who are willing to work in rural areas especially for the poor, though India produces the largest number of therapists in the world. To overcome the huge need for therapists, the 1 Year Rehabilitation Therapy Assistant Training Programme is a step forward for people with disabilities.

India alone needs 100,000 therapist/therapy assistants (1:100) – 1 trained person for every 100 people who need therapy and 20,000 P&O professional (1:500) – 1 trained person for every 500 people who need assistive devices. India has so far developed only 5% of the required manpower. The problem is more acute in many low income countries due to the non-availability of training programmes.

In a country like India, there is a need to train rehabilitation professionals/personnel at three levels (Post-Graduate, Graduate and Diploma/Certificate) to meet the demand at national, regional or provincial, state, district level and if possible, even at block or Taluka level. This certificate level training has a focus on Community Based Rehabilitation (CBR) to meet the needs of people specifically in urban slums and rural areas where the need is greatest and the current provision is most inadequate.

## 1.2 Programme aim

The programme aims at, in particular to meet the needs of People with Disabilities in low income countries who are currently unable to access rehabilitation services. As a first step towards meeting this need the programme is a development towards a second generation of Rehabilitation Therapists with the aim that on completion of the programme students are able to (under supervision) appropriately assess and provide therapy intervention for people with disabilities. They will be able to reassess and evaluate their intervention, document all the above and work within their limitations.

The training is generic and includes relevant aspects of Physiotherapy & Occupational Therapy as well as basic Orthotics and Prosthetics so that they are able to carry out simple repairs and maintenance of appliances in the absence of Orthopaedic Technicians.

Most of the major physical disabilities found in India and other low income countries are included in the training syllabus. This includes management of such disabling conditions as Polio, Cerebral Palsy, Spina Bifida, Spinal Cord Injuries, Amputations, Congenital Birth Defects, Arthritis, Muscular Dystrophy and Developmental Delay. The emphasis on training will be on holistic intervention, concentrating on functional independence and social integration, home-based therapy using appropriate technology with a focus on early identification and early rehabilitation.

## **1.3 Entry Requirements**

Candidates should:

- Have a minimum of 12 years of school OR have completed 'A' level education. Preference will be given to persons with disabilities especially women with disabilities. 12 years of schooling could give students the opportunity to apply for higher category training programmes in future.
- Be aged 18 years minimum.
- Be able to read, write and understand spoken English at basic level that will enable the student to actively participate throughout the training programme.
- Students will be assessed by an English entry exam in the beginning of the course.
- If possible, spend about 3 to 4 months at the organisation where students will be working on completion of their training, prior to coming for the training, preferably in the areas of rehabilitation or Community Based Rehabilitation (CBR) programme. This is not compulsory.

Preference is given to persons with disabilities to be sponsored for training especially women with disabilities. A minimum of 15 to 20 students will be admitted per batch.

## **1.4 Structure and Duration**

The 1-Year Rehabilitation Therapy Assistant Training Programme comprises mainly of 3 interlinked elements. These are:

- Theoretical understanding.
- Supervised practical training and clinical experience in the assessment and therapy intervention to People with Disabilities.
- Communication skills with the needs of the PWD, their families, communities and their role with other professionals in mind.

These 3 elements are developed together throughout the course. The emphasis is on the practical application of skills and the integration of all 3 elements. All aspects of the programme are taught in so far as possible through participatory, practical methods to give the students maximum practical experience in rehabilitation therapy using resources available in their local community. Each trainee's individual learning needs are considered in conjunction with the needs of their specific context on completion of the course.

The programme is of 11 months duration and is based on a 46 Week teaching year with each week having 33 guided learning hours and with a 2 week holiday in-between.

As part of the training programme there are 2 field placements in the rural-based organisations. Each placement is of 2 weeks duration.

Credits refer to the units/points awarded to each module based on the theory and practical hours as per Rehabilitation council of India standardized and approved courses at Diploma level.

The programme is made up of 4 modules I.e. Core Module, Specialised Module, Integration/Clinical practise Module and Supporting Module with each module is comprises of different set of papers and having a credit value.

There are a total of 52 credits attached to each one year course. Modules have a varying number of hours, requirements and importance and the credits allocated to each module reflect this. The student's performances in all modules except the Supporting studies that are not evaluated. Students are required to complete and pass all papers in order to receive training institute certification recognised by Rehabilitation Council of India (RCI).

## **1.5 Holidays**

Students are entitled to the following holidays:

- a) 2 weeks as winter vacation in the 6<sup>th</sup> month.
- b) 13 days of public holidays observed by Training institution.
- c) All Sundays as holiday.

## **1.6 Expected Competencies**

### **OVERALL FUNCTIONS OF THE REHABILITATION THERAPY ASSISTANT**

On successful completion of the course the Rehabilitation Therapy Assistant under supervision of Rehabilitation Therapists (Physiotherapist, and Occupational Therapist) will be able to:

1. Communicate effectively with people with disabilities and their families/carers/ community as well as with other team members.
2. Carry out a basic assessment of persons with a disability in order to identify individual priorities, the main rehabilitation problems and the needs for rehabilitation.
3. Set objective and realistic goals, devise an appropriate treatment plan and ensure regular re-assessment and evaluation of results, with appropriate modifications of goal setting.
4. Carry out effective rehabilitation at community level, in collaboration with other professionals, persons with disability and carers.
5. Inform and build on the knowledge of persons with disability, their family, community members, other CBR team members and the population in general on disability and rehabilitation issues, with appropriate means and documentation.
6. Work collaboratively with the rehabilitation team and if required manage the day-to-day activities of the therapy unit and support field staff to implement rehabilitation programmes at field level.
7. Build a network with all possible professionals in the area/region so as to increase the possibility of referral to the required level whenever necessary

# Expected Tasks of the Rehabilitation Therapy Assistant

The expected competencies of the Rehabilitation Therapy Assistants relate to three major areas of professional tasks:

- Technical tasks
- Administration tasks
- Communication tasks

## Technical tasks

### A. Assessment

1. History taking and assessment of service user and their family's priorities.
2. Basic assessment of general health
3. Basic assessment of impairment, activity and participation, with a focus on functional ability (including activities of daily living and mobility).
4. Physical assessment to determine the impairments that are affecting functional ability, including; range of movement and power; sensation, muscle tone, balance and coordination; deformities and other secondary problems.
5. Basic assessment of cognitive and mental health problems.

### B. Programme Planning

1. Identify the abilities, problems and needs of the service user and their family.
2. Based on the above, help the service user and their family to set treatment goals, with the involvement of other members of the rehabilitation team if appropriate.
3. Based on the treatment goals, plan a treatment programme with the service user, their family and other members of the rehabilitation team.
4. Ensure the programme is regularly reviewed and modified to reflect changing needs of the service user and their family.

### C. Specific intervention

1. Based on the assessment, select appropriate interventions and carry them out safely and effectively. Interventions should be carried out through functional activities wherever possible. The RTA will be proficient in the following interventions:

- Activities to maintain/increase muscle range of movement and power
- Positioning and postural management
- Activities to improve respiratory function
- Massage to reduce oedema and manage scars
- Hot and cold treatment for pain relief
- Activities to improve balance and coordination
- Activities to improve muscle tone (reducing or increasing, as appropriate)
- Activities to increase independence in activities of daily living
- Design and making of developmental aids and aids for daily living
- Activities to improve transfers

- Provision of appropriate walking aids
  - Gait training with appropriate appliance/walking aid, if needed
  - Training in the functional use of an orthopaedic appliance
  - Basic check out and repairs of all orthopaedic appliances
  - Provide and train a person to use a wheelchair
2. The RTA will also be able to:
- Identify and recommend home adaptations which will improve accessibility
  - Identify when an orthopaedic appliances is needed and refer on appropriately
  - Carry out safe moving and handling during all interventions (considering safety of self and service user/family).

#### D. Management of Specific groups

The RTA will be able to:

1. Assess and carry out a basic therapy programme for a person with a physical disability, who also has:
  - a) A visual impairment
  - b) Communication problems
  - c) An intellectual disability
2. Identify when a person with a physical disability also has a mental illness and refer the person to the appropriate resource.

#### E. Social Integration

1. Identify and utilise resources in the community for the rehabilitation of persons with disability.
2. Facilitate and promote the integration of a person with a disability into their community and society.
3. Promote the participation of people with disabilities in the recreational and social activities within the community.

#### F. Work/ Education

1. Help children with disabilities go to school by removing physical barriers & educating family & community on the importance of education
2. Advise people with disabilities and their families and provide rehabilitation that will facilitate suitable income generation/job opportunities.

### **Administrative tasks**

1. Record client personal information.
2. Record treatment goals.
3. Record assessment and problem list.
4. Record rehabilitation implementation details (who, how, when, how much, etc...)
5. Regular record re-assessment and treatment progress.
6. Ensure safety of disabled person and self throughout treatment.
7. Fix and record appointments for clients and carers.

8. Monitor and record rehabilitation equipment and materials (stock).
9. Plan and place orders for rehabilitation equipment and materials.
10. Maintain basic statistics necessary for effective day-to-day management of Therapy Unit.
11. Respect management directives and code of conduct of the organisation.
12. Organise rehabilitation therapy activities.
13. Maintain rehabilitation therapy premises condition and cleanliness.

## **Communication tasks**

1. Communicate effectively with all persons with disability.
2. Communicate effectively with the families and carers of PWD.
3. Communicate effectively with members of the community, community groups and leaders.
4. Communicate effectively with other rehabilitation professionals.
5. Refer persons with disability to other professionals whenever necessary.
6. Work as a team member with all other staff within the rehabilitation team/organisation.
7. Provide necessary information to the population regarding health, disability and rehabilitation issues.
8. Provide information, advice and training to people with disabilities and their carers.
9. Provide information, advice, training and support to field staff to carry out community level interventions.

## **Professional Ethics**

1. He/She will always try to perform to the highest standard of his/her skills and knowledge.
2. He/She will work within the limitations of their training and experience. He/she will not attempt to do tasks that he/she is not qualified or skilled in doing.
3. He/She will have respect for People with Disabilities and their families at all times (whatever their caste, religion, language, socio-economic state of the person).
4. He/She will provide services in a professional manner, which focuses on the need of the PWD and their family. He/she will never follow his/her own financial, commercial or personal interests.
5. He/She will respect PWDs privacy.
6. He/She will work as a member of a rehabilitation team, respect other members of the team and respect the team's decisions.

## **SECTION 2 - ORGANISATION OF THE COURSE**

### **2.1 Introduction**

The syllabus for the Rehabilitation Therapy Assistant has been organised in a modular format. To this end, theoretical and practical modules run side by side with integrative and clinical practise to facilitate the integration of the student's learning experiences.



## 2.2 Syllabus

Module	Topic	Theory Hours	Credits Theory	Practical hours	Credits Practical	Total Hours	Total Credits
	<b>A. CORE MODULES</b>						
Paper 1	General Anatomy and Physiology	108	6	---	---	108	6
Paper 2	Personal and Professional studies	36	2	108	3	144	5
Paper 3	Disability, Development and Community Based Rehabilitation	36	2	72	2	108	4
	<b>B.SPECIALISED MODULES</b>						
Paper 4	Clinical Studies(Disabling conditions)	72	4	36	1	108	5
Paper 5	Rehabilitation Intervention I	108	6	144	4	252	10
Paper 6	Rehabilitation Intervention II	108	6	144	4	252	10
	<b>C.INTEGRATION/C LINICAL PRACTISE MODULES</b>						
Paper 7	Clinical Placement	---	---	216	6	216	6
Paper 8	Rural Placements	---	---	144	4	144	4
	<b>Total</b>					<b>1332</b>	<b>50</b>
	<b>D. SUPPORTING MODULES (Optional)</b>						
	English, Maths, Computer studies, Drawing.					<b>71</b>	<b>0</b>

## **2.3 The Role of Clinical Practise**

By the end of the programme the students will be able to integrate theoretical and practical learning into the community. Throughout the programme opportunity will be provided to facilitate this approach with the emphasis on experience in the field. Both the experience in training institute and CBR project areas as well as the partner placement in a rural environment provide opportunity for students to apply basic concepts and principles to practical situations in the community. Students become more proficient in the application of rehabilitation techniques and develop and demonstrate positive professional attitudes in the community.

## **2.4 Teaching - Learning Experiences**

The training programme will utilise a participatory approach to learning which will provide students with opportunities to develop the knowledge, attitudes, and skills necessary to carry out their role as Rehabilitation Therapy Assistants on completion of the course.

Special attention is placed on the development of the positive attitudes towards Persons with Disabilities (PWDs) and their eventual performance in their own work environment.

Among the teaching-learning strategies (methods) which will be utilised are:

- Field and Workshop experience
- Practical
- Case studies
- Demonstrations
- Participative class session (lecture)
- Self study
- Questions and answers
- Role play and Simulations
- Trainee presentations
- Projects and group work

Among the above-mentioned methods, some are more suitable for teaching knowledge, others are more suitable for developing or changing attitudes and some are more appropriate for teaching skills.

The emphasis both throughout the training and during the assessment of the students' learning outcomes is on the basic principle of problem solving. The integrative studies module has been added to the syllabus to provide a specific forum where problem solving can be applied. As a strategy, problem solving presents complex issues to students and prepares them to apply their knowledge and experience to situations, which will arise in their work. The utilisation of this approach facilitates learning and enhances the skills of the student.

## SECTION 3 - ORGANISATION OF TRAINING PROGRAMME

### 3.1 Staffing

Sl. No.	Faculty	Number	Duration	Profile
1.	Programme Coordinator	1 (one)	Full Time	A rehabilitation professional with extensive clinical experience as well as experience as a tutor and a clinical supervisor. His/her responsibilities include strategic planning, implementation of the curriculum, monitoring and evaluation of the programme.
2	Tutors	2 (Two)	Full Time	Occupational Therapist and Physiotherapist with an active role in their particular field in addition to their role as tutors.
3	Other Trainers	2 (two)	Part Time	Medical Doctor, Orthotist, Prosthetist, CBR specialists, Vocational Counsellor and Administration staff.

Note: In practical sessions and clinical experience, the teacher/student ratio will be 1/8 to 10. Additional resource persons for identified curriculum areas are drawn from other sectors, agencies, organisations and national institutes. These include medical doctors, development workers, social workers and rehabilitation professionals.

#### Field Supervisors

During their clinical practise in the rural-based organisations students are supported and supervised by the experienced Therapists and Orthopaedic Technicians who are based there.

#### Personal Guides (Mentors)

Personal Guides are made up of training institute other than trainers with appropriate skills.

### 3.2 Student Support Services

#### Personal Tutors

Each trainee will be allocated a personal tutor who will provide educational and learning support throughout the course. Their role is:

- To provide general learning support.
- To support the trainee in the development of their study skills.
- To provide direct learning support with specific areas that the trainee may be struggling with or if it's more appropriate, guide the trainee in accessing additional support.

#### Personal Guides

Personal guides are recruited from training institute staffs who are not part of the key training team. Each trainee will be allocated a personal guide for at least first 3 months after their arrival. After this time the system will be evaluated. The role of the personal guide is:

- To provide support for the students when they first arrive to training institute by helping them to settle in to the new environment.
- To work with the trainee to help them cope with personal and practical issues especially during the initial phase of their stay at training institute.

### **3.3 Assessment of student's performance**

There are 2 elements to the assessment of students' performance within the training programme. These are formal and informal.

#### **Informal Assessment**

Informal assessment is designed to give the trainers and students feedback on their level of understanding and skill. This is carried out continuously throughout the year and takes the form of self and peer assessments, class assignment, tests and project. This enables the trainers and students to focus the students learning on their areas for improvement/development.

#### **Formal Assessment**

Formal assessment of trainee's performance is aimed at identifying whether they have achieved an acceptable level of performance in all the areas outlined in the expected tasks of a Rehabilitation Therapy Assistant (see section 1.8).

Each paper is evaluated according to its content, its specific objectives and the amount of credits allocated. The methods used include the following:

- Written and Oral Exams
- Practical exams
- Case Presentations
- Practical Case Studies
- Poster presentations
- Projects/Portfolios
- Reflective Diaries
- Recording of competency achievement in specific tasks

**NOTE:** Rural placements modules are evaluated jointly by a training institute Tutor and the field Supervisor in the rural organisation.

Wherever it is appropriate, evaluations are internally validated by a system of cross-marking by separate trainers to ensure consistency and objectivity of marking grades.

Training institute aims to provide equal opportunities to all students. Where a trainee's disability limits their ability to complete a set evaluation for a particular module, a different evaluation method which will fulfil the requirements of that module will be selected. In this case alternative

evaluation methods will be validated by an internal committee comprised of experienced trainers of the training institute.

## **Evaluation Structure**

Paper	Name of the paper	Theory	Practical/ Oral	Internal Examination		External ( MAHE) Examination		Total
				Theory	Practical/ Oral	Theory	Practical/ Oral	
Paper-1	General Anatomy and Physiology	√	X	40	----	60	----	100
Paper-2	Personal and Professional studies	X	√	----	60	----	40	100
Paper-3	Disability development and community based rehabilitation	√	X	40	----	60	----	100
Paper-4	Clinical Studies	√	X	40	----	60	----	100
Paper-5	Rehabilitation Intervention I	√	√	40	60	60	40	200
Paper-6	Rehabilitation Intervention II	√	√	40	60	60	40	200
Paper-7	Clinical Placement	X	√	----	60	----	40	100
Paper-8	Rural Placement	X	√	----	60	----	40	100
<b>Total marks</b>								<b>1000</b>

### **Distribution of Internal/External Marks for Theory & Practical**

Theory will have 40% internal and external 60% marks

Practical will have 60% internal and external 40% marks

A candidate must obtain 40% pass mark in each theory paper and 50% in each practical paper separately in internal & external assessments. **A pass aggregate of 45% will be accepted.**

### **Minimum attendance: -**

A minimum attendance of 80% is required to be eligible to appear in the examination.

## **Failing Students**

Students must pass each evaluated module during the course of the programme. In the event of a trainee failing any specific module, the supplementary examination will be held in the month of September each year.

*There will be no supplementary examinations for failure in practical examinations. Supplementary exams will be held only for theory papers.* In a one year duration course a candidate will be allowed three attempts in a span of three years from the date of admission. A candidate will have to seek re-admission to the course if she/he fails to successfully pass the course in the extended period and number of chances permitted. . (This is at the discretion of and subject to negotiations with the Training institute Academic Board).

- There will be no provision for improvement in scores.
- Provision for re-examination and re-evaluation in exceptional cases.
- Re-totalling of marks by the examination body will be done in routine for all examinations and paper will be shared to the candidate on written request from the candidate on payment of Rs.100/-

For students to receive a Training institute Certificate of Achievement recognised by Rehabilitation Council of India they must pass every evaluated module. If a trainee fails to pass all modules they may apply for a certificate indicating that they have attended the course rather than the certificate of achievement. However, decision of granting such a certificate will depend on the Academic Board and Affiliating Body.

## **Compulsory withdrawal from the programme**

Training institute reserves the right to withdraw a trainee from the programme compulsorily for the following reasons:

- a) Disciplinary grounds e.g. unacceptable behaviour or professional ethics etc.
- b) Unacceptable academic or clinical performance.

## **Certification**

A Student who has attended the training and completed the requirements for all modules successfully will be qualified as a **Rehabilitation Therapy Personnel** and be eligible to receive a certificate from Training institute to work in the field of Rehabilitation in India as a **Rehabilitation Therapy Assistant**. After successful completion of the course, the student will be eligible for registration with **Rehabilitation Council of India**.

## **3.4 Programme Evaluation**

An evaluation team comprising internal and external examiners evaluate the programme during and at the completion of each batch. The internal evaluators comprise a core group of teaching co-ordinators from Training institute as well as all the students.

The external evaluators comprise of inspectors from the Rehabilitation Council of India, experts from National institutions and members of the Physical Medicine and Rehabilitation Department and other reputed hospitals.

## **3.5 Facilities**

### **Learning Sites**

- Training and experience in CBR will be located at Training institute's CBR project area.
- Clinical placements are arranged by Training institute in rural areas.

### **Learning facilities**

- There are several large classrooms and a library with a comprehensive collection of books and journals in orthoses, prostheses, physiotherapy, occupational therapy, Medical, rehabilitation, CBR, disability and allied issues.

### **Audio – Visual resources**

- Whiteboard / flip chart, overhead projector, charts, models, skeleton, Computers, LCD projector and Video cassettes, photos, slides, CDs etc are available

## **3.6 Follow-up support after completion of training**

After the completion of the training, if desired by the sponsoring organisation, training institute will provide technical support for the creation and strengthening of workshops and therapy facilities, primarily in the rural areas and to assist the organisations to run the programme efficiently.

Training institute also periodically organises seminars/refresher courses and workshops to update the knowledge and skills of the trained personnel.

## SECTION 4 - PROGRAMME MODULES

### 4.1 Core Modules

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<b>Paper 1</b>	<b>GENERAL ANATOMY AND PHYSIOLOGY</b>	<b>108 hours</b> <b>Credits - 6</b>
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#### Overall Description

In this module the trainee learns about the basic anatomy of the main body systems and the stages of normal child development. This module provides a foundation of knowledge that will be applied throughout the rest of the training programme.

#### Overall Objectives

Students will be able to develop an understanding the basic anatomy of the human body and the normal stages of development of a child from birth to 5 years.

#### Contents

Unit	108 hrs
1. Body parts, Medical vocabulary, Physiology (general body systems) 2. Skeletal system, Joints 3. Muscular system 4. Nervous system, Child development 5. Biomechanics	

#### Unit I

#### Body Parts and Medical Vocabulary Physiology (General Body Systems)

#### Description

In this unit the trainee learns to identify the main parts of the body as well as understand and use medical vocabulary. They also learn basic anatomy and physiology of the circulatory, respiratory, urinary and digestive body systems. They will also be introduced to the skin, musculo – skeletal and nervous systems.

#### Objectives

At the end of the unit the trainee will be able to:

1. Identify the main body parts presented in this unit.
2. Describe the anatomical position.
3. Explain why the anatomical position is important.
4. Apply medical vocabulary for body parts and locations.
5. Apply medical vocabulary for body positions and direction of body movements.
6. Identify the structure and function of the circulatory system.



7. Identify the structure and function of the respiratory system.
8. Identify the structure and function of the urinary system.
9. Identify the structure and function of the digestive system.
10. Identify the structure and function of the skin
11. Describe different body systems and its relationship.

## **Unit 2**

### Skeletal System (Osteology) & Joints (Arthrology)

#### **Description**

In this unit the trainee learns about the basic mechanisms of bone growth and repair as well as the specific bones of the human body and their functions and also about the general structure of a joint, the possible movements occurring in a joint as well as the specific joints of the human body.

#### **Objectives**

At the end of the unit the trainee will be able to:

1. Relate the structure of the bones of the body to their function.
2. Explain how normal bone grows
3. Apply bone growth principles to broken bones and amputations.
4. Identify and describe major bones of the body
5. Describe the normal curves of the vertebral column.
6. Describe different types and structure of a Joint.
7. Explain the directions of joint movement
8. State the amount of degrees for different angle measurements.
9. Estimate the amount of movement in a given joint.

## **Unit 3**

### Muscular System (Myology)

#### **Description**

In this unit the trainee learns about the basic physiological aspect of muscle contraction as well as the specific muscles of the human body.

#### **Objectives**

At the end of the unit the trainee will be able to:

1. Identify different types of muscles
2. Describe what a muscle is made of, how a muscle works and what happens when a muscle is tired.
3. Identify if an action is an isometric, eccentric or concentric muscle contraction.
4. Explain the concept of gravity and how it affects muscle action.
5. Identify group muscle names, locations and actions

## **Unit 4**

### Nervous System (Neurology) & Child Development

#### **Description**

In this unit the trainee learns about the basic physiological and anatomical aspects of the nervous system and also will learn about the normal stages of development of a human child from birth to 5 years

#### **Objectives**

At the end of the unit the trainee will be able to:

1. Identify the difference between the central nervous system and the peripheral nervous system.
2. Indicate the main parts of the brain
3. Identify the difference between a sensory nerve and a motor nerve.
4. Describe the difference between a reflex and a voluntary movement.
5. State the functions of the different spinal cord levels.
6. Describe the developmental milestones of a normal child.
7. Differentiate between physical, mental and social skills.
8. Describe the importance of these skills in normal development.
9. Assessment of development of normal child

#### **Contents**

- The physical, mental and social development of children.
- Sequencing of the Assessment of physical, mental, social milestone of a child
- Assessment of physical, mental, social milestone of a child

## **Unit 5**

### Biomechanics

#### **Description**

In this unit students gain a basic understanding of biomechanics that will enable them to understand the basic biomechanics of normal human movement and thereby apply this understanding to their intervention with people with disabilities.

#### **Objectives**

At the end of the unit the trainee will be able to:

- Explain The plane and axis in relation to human body
- Demonstrate and describe gravity and its effect on the human body.
- Describe and demonstrate how levers and forces affect the human body.

**Overall Description**

This module focuses on both the trainee's inter - personal skills and their developing professional skills. This is complementary to technical skills and is essential to work in their capacity as a Rehabilitation Therapy Assistant.

**Overall Objectives**

In this Module students develop self- knowledge and skills in the personal and professional areas that are complimentary to their work as Rehabilitation Therapy Assistant.

Therapy

**Contents**

Units	144 hours
1. Communication Skills and Active Listening (Counselling)	
2. Personal and Professional Development	
3. Organisation and Documentation	
4. Training Skills	
5. Management of Therapy Unit	

**Unit 1****Communication Skills and Active Listening (Counselling)****Description**

In this unit the trainee learns about the communication process and reflects on their own communication skills. Also they understand and use the active listening component of counselling. It will reinforce the importance of their communication and listening skills in their role as Therapy Assistant. The course will help the trainee to understand when and how to use basic active listening techniques. The main focus will be on enabling the students to acquire practical skills in active listening

**Objectives**

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

1. Describe the process of communication
2. Identify barriers to communication
3. Identify different types of communication
4. Demonstrate the ability to communicate effectively with their peers.
5. Reflect on their own communication skills
6. Identify the need for active listening
7. Describe why active listening techniques are important
8. Describe when they would use basic active listening techniques

9 Use basic active listening techniques with a person with disabilities, their family or carer

## **Contents**

- What is Communication?
- Importance of good communication.
- Verbal and non – verbal communication.
- Barriers to communication.
- Aspects of effective communication.
- Communication in organisations.
- Definition of counselling and active listening.
- Types of counselling and active listening.
- The need for counselling or active listening
- Process and practice active listening

## **Unit 2**

### Personal and Professional Development

#### **Description**

In this unit the trainee learns the skill of reflection in the context of their role as a trainee and in their future role as a practitioner. They consider their support and learning needs and how they will meet these on completion of the programme.

#### **Objectives**

At the end of the unit the trainee will be able to:

1. Describe their personal learning style.
2. Reflect on their strengths and needs with regard to their professional role.
3. Use reflective practise as a method of self-development.
4. Describe how they will continue their professional development on completion of the training programme.
5. State ethical considerations which they need to consider as Rehabilitation Therapy Assistants.

#### **Contents**

- Awareness of Self and how others see us
- Awareness of Learning Style
- Awareness of Professional Role
- Strengths and weaknesses
- Reflective and problem solving practise
- Continuous Professional Development
- Ethics and the code of conduct

## **Unit 4**

### Organisation and Documentation

#### **Description**

In this course students learn the process of documentation, record keeping and the organisational skills required to be a Rehabilitation Therapy Assistant.

#### **Objectives**

At the end of the course the trainee will be able to:

1. Explain the value and importance of good documentation.
2. Record information relevant to a Rehabilitation Therapy Assistant service.
3. Organise a Rehabilitation Therapy Assistant programme to meets an individual's needs.
4. Carry out day-to day management of a Therapy Unit.

#### **Contents**

- Designing assessment forms
- Recording assessment and reassessment
- Recording problem lists
- Recording long and short term goal setting
- Recording intervention
- Evaluating treatment and keeping statistics
- Importance of safety for PWD and self
- Time Management and use of a diary
- Fixing and keeping appointments
- Maintenance of premises and equipment
- Report writing
- Overall skills required in the day-to-day management of a Therapy Unit

## **Unit 5**

### Training Skills

#### **Description**

In this unit the trainee learns about methods and techniques used in training others. They will develop the skills of training and facilitating learning in others. This will focus on training used to skill-build people with disabilities and their families as well as training of CBR workers and other members of the community.

#### **Objectives**

At the end of this course the trainee will be able to:

- 1 Describe why training skills are important within their role.

- 2 Describe the importance of involving PWD and their family members when carrying out training.
- 3 Teach a specific skill to a person with a disability or their family member.
- 4 Prepare visual aids and training tools for use when training.
- 5 Demonstrate how they would plan a specific training session.

## **Contents**

- Participatory training methods and skills
- Teaching a specific skill to an individual
- How to plan
- Presentation skills
- Preparing visual aids and training tools

## **Unit 6**

### Management of Therapy Unit

#### **Description**

In this unit the trainee learns basic element of management of a therapy unit, the basics of simple accounts, basic concepts of managing Labour/Workforce and planning the budget.

#### **Objectives**

At the end of the unit the trainee will be able to:

1. Plan a simple budget and purchase the necessary raw materials required for a therapy unit.
2. Manage and carry out day-to-day activities in the therapy unit.
3. Maintain simple account records.

#### **Contents**

- Introduction to Basic Management and management skills
- Principles of costing and general costs of production
- Material acquisition, handling and storage
- Stores management including Storage Stock control, Performa Invoices, Receipts
- Purchasing and transport
- End price
- The work force and its management
- Labour and Calculation of average man-hour
- Productive and non-productive hours
- General costs related to manpower
- Financial statements
- Statements
- Budgets
- Production cost calculation, end price and profit
- Planning, Preparation and Control of Therapy Unit

**Overall Description**

In this module the students learn about the importance of primary health care for the community they will be working with. They will consider the socio-economic situation of people with disabilities in the community and the link between disability and development. The emphasis in this module is on the deepening of the trainee's understanding of issues around disability and the development of a positive attitude to people with disabilities in society. Through extensive field visits to the local CBR projects students gain practical experience and insight into the needs of the people they aim to help. By accompanying experienced CBR workers into the field they gain an understanding of CBR and their role within the CBR framework.

**Overall Objectives**

For the students to develop an understanding of the health and socio-economic context of people with disabilities in the community and their role and the role of CBR in this.

**Contents**

Unit	108 hrs
1. Poverty and disability. 2. Disability and development 3. Primary health care 4. CBR 5. Holistic rehabilitation	

**Unit 2**

Poverty and Disability.

**Objectives**

At the end of the unit the trainee will be able to:

1. Understand the different causes of disability
2. Link between poverty and disability
3. Definition of disability, its causes, prevention and the disability process
4. Link between poverty and disability
5. Status of PWDs in India and in other low income countries
6. Background to social, political and economic issues in India and other low income countries. The affect on the poor who live in rural and urban areas.

## **Unit 2**

### Disability and Development

#### **Description**

This unit will focus on the socio – economic situation of persons with disability, prevalence of disability, the attitudes and prejudices that they face and their rights and responsibilities.

#### **Objectives**

At the end of the unit the therapy assistant will be able to:

1. Reflect and analyse on our attitude/values and attitudes towards persons with disabilities, their families and the community (Socio-cultural and religious).
2. Describe how it felt to have a simulated disability.
3. Describe the need for creating equal opportunities and experiences for PWD to be an integral part of society with a better quality of life.
4. Address disability as a development issue as relevant to their local context.
5. Explain the importance of promoting a barrier free environment for people with disabilities and be able to carry out the same.

#### **Contents**

- Attitudes of person with disability, family and community
- Exercise of portrait of disabled person and experiencing disability.
- A day in disabled persons life
- Needs of people in society
- Disability , women & Children
- Environmental Barriers and promoting barrier free environment
- Simple methods to create a Barrier Free Environment in house, school, roads, toilets, community levels.

## **Unit 3**

### Primary Health Care

#### **Description**

In this unit the trainee learns basic information about the philosophy and structure of Primary Health Care. It will also focus on the working role of Therapy Assistants and Orthotic and Prosthetic Technicians within this structure.

#### **Objectives**

At the end of the unit the trainee will be able to:

1. Explain the philosophy of Primary Health Care.
2. Identify common health problems encountered in the community.



3. Describe the role of the Rehabilitation Therapy Assistant and know where to refer people with health problems.

## **Contents**

- Introduction to primary health care.
- Common childhood illnesses.
- Causes and prevention of disease and infection. Health promotion – to include vaccination programmes, need for good sanitation and clean drinking water.
- Malnutrition.
- Basic First Aid.
- Referral procedures.
- Women's health.
- T.B
- HIV/AIDS.
- Sanitation and hygiene
- The referral process including:
  - Visits to Primary Health Centres
  - Visits to other Referral Centres.

## **Unit 4**

### Community Based Rehabilitation (CBR)

#### **Description**

In this unit the trainee learns about CBR and its relevance in low income countries. They learn about their role within the CBR framework.

#### **Objectives**

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

1. Explain what is CBR and its relevance
2. The different models of cbr
3. Explain the steps in setting up and the project cycle of a CBR programme
4. Assist in planning, implementing, monitoring and evaluating of the CBR programme.

#### **Contents**

- Describe the prevalence of disability in the urban and rural parts of India and the trends in other low income countries.
- What is CBR?
- Strength and limitations of CBR.
- Principles involved in the implementation of a CBR programme – Roles of different stake holders, optimum use of resources and bridging the gap between the PWDs in the community and the resources.
- Roles and responsibilities of the implementing agency.
- Roles of the trainee in contributing to an effective CBR programme.

- Role of students in planning, implementing, monitoring and evaluating of the CBR programme.
- Need for basic Documentation in a CBR programme.

## **Unit 5**

### Holistic Rehabilitation

#### **Description**

In this unit the trainee learns about rehabilitation services.

#### **Objectives**

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

- The different approaches to rehabilitation.
- Holistic Rehabilitation -Health (Prevention, promotion, cure, Rehabilitation), Education (Pre-primary, Primary, Secondary, higher and special education), economic (Job oriented training, IGP, advocacy) and Social (Environmental, societal, religious barriers, sports and recreational barriers). Plan and Review.
- The role of a professional in a holistic rehabilitation.
- The rights of persons with disabilities and means of accessing the rights.

#### **Contents**

- Different approaches for the rehabilitation of PWD (Institutional based Rehabilitation, Community Based Rehabilitation, Camps, Outreach services, mobile services)
- Holistic (Medical & Social) Rehabilitation Plan and Review.
- Rehabilitation is a team work
- Introduction to disability issues, different acts, Government schemes and initiatives, legislation, and methods of accessing them.

## 1.2 Specialised Modules

Paper 4 CLINICAL STUDIES (DISABLING CONDITIONS)

108 hours  
Credits - 5

### Overall Description

In this paper the students learn about the specific disabling conditions introduced in this programme. This includes their cause, resulting functional problems, the rehabilitation plan including different therapeutic and prosthetic / orthotic intervention, and appropriate referrals to other agencies.

### Overall Objective

For the students to be introduced to the common conditions of PWDs that they will be providing intervention for in their community.

### Contents

Unit	108 hrs
1. Poliomyelitis, cerebral palsy ,SCI, PNI, Spina bifida and Stroke 2. Arthritis, Fractures, Amputation and Congenital deformities 3. Burns, Muscular dystrophy and Multiple Disabilities 4. Other disabling conditions and Older people 5. Intellectual disability, Mental illness, Blindness, low vision and communication problems	

### Unit 1

#### Description

In this unit, students learn about the causes and presenting signs and symptoms and general rehabilitation management of Polio, Cerebral palsy, Spinal cord injury, Peripheral nerve injury and Erb's palsy, Spina bifida and Stroke

#### Objectives

At the end of this unit, the trainee will be able to:

1. Describe the effects of Polio. Carry out a basic assessment of a person with Post Polio Residual Paralysis (PPRP).
2. Describe basic management of person with Post Polio Residual Paralysis (PPRP).and
3. Carry out detailed assessment and rehabilitation intervention for a person with PPRP. Refer a person with PPRP to the appropriate resource.
4. Identify and describe Cerebral Palsy. Describe the problems experienced by children who are born with this condition.
5. Carry out a basic assessment and describe management of children with Cerebral Palsy.
6. Describe the importance of activity for a child with a Cerebral Palsy and give advice to parents with regard to functional activity, communication and behavioral problems with their child.

7. Describe the secondary problems of adults with Cerebral palsy and advice/training they would require
8. Carry out detailed assessment and therapy intervention for a child with Cerebral Palsy. Refer a child with Cerebral Palsy to the appropriate resource
9. Give advice and training to parents of children with cerebral palsy on functional activity.
10. Explain what a spinal cord injury is and the different causes of this condition.
11. Describe the problems experienced by a person with a spinal cord injury.
12. Carry out a basic assessment and describe the basic management of the problems encountered by a person with a SCI Refer a person with SCI to the appropriate resource
13. Carry out a detailed therapy assessment of a person with a spinal cord injury. Describe therapy and orthotic intervention for a person with a SCI
14. Describe what happens to a peripheral nerve when it has been damaged. Identify complications that can occur after a peripheral nerve injury.
15. Describe how therapy and Orthotic intervention can help a person with a peripheral nerve injury. Refer a person with peripheral nerve injury on to the appropriate resource
16. Describe what is Spina Bifida and Hydrocephalus and explain the problems encountered by children who are born with this condition.
17. Carry out a Basic assessment and describe the basic management of the problems encountered by a child with Spina bifida. Refer a person with Spina Bifida to the appropriate resource Describe what advice they may give to parents of a child with Spina bifida
18. Carry out a detailed assessment of child with Spina bifida. Describe therapy and orthotic intervention for a child with Spina Bifida
19. Identify when someone has had a stroke and its causes. Describe the physical problems faced by a person who has had a stroke. Describe how stroke can affect vision, speech and swallowing and cognitive abilities.
20. Carry out a detailed assessment of a person who has had a stroke, including functional assessment Refer a person who has had a stroke to the appropriate resource. Carry out appropriate therapy and orthotic intervention for a person who has had a stroke.

## **Unit 2**

### **Description**

In this unit students will learn what is Arthritis, Fractures, Amputation, Congenital deformities, what can cause these and what complications can occur. They learn about the general rehabilitation management.

### **Objectives**

At the end of the course the trainee will be able to:

1. Describe an arthritic joint and differentiate between osteoarthritis and rheumatoid arthritis and other joint problems.
2. Describe the functional problems encountered by a person with arthritis
3. Carry out a basic assessment and describe how Therapy and Orthotic intervention can help a person with arthritis. Refer a person with arthritis to the appropriate resource
4. Describe fracture, its cause and compare different types of fractures. Describe how a fracture heals.
5. Carry out a basic assessment and describe the management of different types of fractures

6. Refer a person with fracture to the appropriate resource. Describe appropriate therapeutic and orthotic assessment and intervention and treatment following a fracture.
7. Describe the causes and complications of amputations and Identify different levels of amputations in the upper and lower limb.
8. Carry out basic assessment and describe the management of amputations. Refer a person with an amputation to the appropriate resource
9. Describe good positioning to decrease joint stiffness in above and below knee amputees.
10. Describe and explain appropriate therapy and prosthetic treatment for different stages of recovery for an amputee. Demonstrate appropriate bandaging techniques for amputees.
11. Demonstrate appropriate massage technique to reduce oedema and manage scars.
12. Demonstrate the process of gait training for amputees with appliances and identify gait problems and describe solutions to decrease these.
13. Describe the symptoms and features of each condition and describe the problems/disabilities associated with each condition.
14. Carry out a basic assessment and describe the basic management of each disability. Refer a person with congenital deformities to the appropriate resource
15. Describe appropriate orthotic management for Genu recurvatum, knock knee, club feet, flat feet, Arthrogyphosis.
16. Carry out a detailed therapy assessment and describe the management for Genu recurvatum, knock knee, club feet.
17. Carry out detailed therapy assessment and describe the management for children with missing limbs and describe appropriate prosthetic management for children with missing limbs

### **Unit 3**

#### **Description**

In this unit students will learn what is Burns, Muscular dystrophy, Multiple disabilities, what can cause these and what complications can occur. They learn about the general rehabilitation management.

#### **Objectives**

At the end of the unit the trainee will be able to:

1. Describe the different types of burns and how they are managed
2. Describe how therapy and Orthotics can help a person with a burn injury
3. Carry out basic therapy assessment and describe therapy intervention for a person with a burn injury. Refer a person with a burn injury on to the appropriate resource
4. Identify and describe people (children) with Duchenne's muscular dystrophy.
5. Describe the main problems of children with Duchenne's muscular dystrophy.
6. Carry out a basic assessment and describe the management of a child with Duchenne's Muscular Dystrophy.
7. Explain how they can support the family and carers of people with Duchenne's Muscular Dystrophy.
8. Refer a person with Duchenne's Muscular Dystrophy to the appropriate resource
9. Carry out a detailed assessment a child with Duchenne's Muscular dystrophy.
10. Describe how therapy and orthotic intervention can help.

11. Identify and describe common problems for a child with multiple disabilities and their family.
12. Carry out a basic assessment and describe management of children with multiple disabilities. Refer a child with multiple disabilities to the appropriate resource.
13. Carry out an assessment and therapy intervention for a child with multiple disabilities, with focus on training the family.

## **Unit 4**

### **Description**

In this unit the trainee learns about some of the less common bone problems that they may meet in the field and how they can help people with these conditions.

### **Objectives**

At the end of the unit the trainee will be able to:

1. Describe the signs and symptoms of:
  - a. osteomyelitis
  - b. osteoporosis
  - c. T.B. spine
  - d. Rickets
  - e. Congénital dislocation of hip.
  - f. Hansen's Disease
  - g. Diabetes
2. Explain why it is important to get medical advice with these conditions.
3. Describe how Therapy, Orthotic and Prosthetic intervention can help a person with these conditions.
4. Refer a person with one of the above conditions to the appropriate resource.
5. Describe the common problems experienced by older people and why/how management should be modified accordingly.
6. Carry out assessment & appropriate intervention for an older person.
7. Refer an older person with a specific problem to the appropriate resource.

## **Unit 5**

### **Description**

In this unit students will learn to identify a person with intellectual disability , Mental illness, Blindness and low vision, communication problems and where to refer a person with this condition.

### **Objectives**

At the end of this unit the trainee will be able to:

1. Describe the behaviors found with people with Intellectual disability. Differentiate between Intellectual disability and Cerebral Palsy.
2. Refer a person with Intellectual disability and their family to the appropriate resources. (Basic assessment & Intervention)

3. Carry out therapy assessment and intervention for a child with intellectual disability.
4. To explain what is mental illness, its causes and differentiate between mental illness and intellectual disability/physical conditions (e.g. cerebral palsy, epilepsy).
5. To be able to identify when someone has a mental illness.
6. To describe types of mental illness that can occur as a direct result of a physical disability (e.g. depression).
7. To understand how and why someone caring for a child/adult with physical disability is at risk of developing a mental illness.
8. To describe the impact a mental illness can have on a person's physical rehabilitation programme and what you can do about it as a professional.
9. Describe the common causes of blindness and low vision. Describe different levels and types of blindness and low vision
10. Describe how blindness and low vision can be prevented
11. Help a person with blindness and low vision to use a mobility aid. Refer a person with blindness and low vision to the appropriate resource
12. Carry out a basic assessment and intervention plan for a child or adult with a blindness and low vision (who also has a physical disability).
13. Identify when a person has a communication problem. Describe basic principles of communicating with a person with communication problems. Refer a person with communication problems to the appropriate resource.
14. Carry out a basic assessment and intervention plan for a child/adult with communication problems (who also has a physical disability)
15. Encourage total communication skills that are age appropriate for a child or adult with communication problems.

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**Paper 5 & 6      REHABILITATION INTERVENTION – I & II      504 hours**  
**Credits 20**

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**Overall Description**

In the first part of this paper the trainee's learning will be directed at the application of basic procedures/techniques/strategies used in therapy. The course seeks to develop relevant skills and positive attitudes in the application of the different procedures / techniques / strategies. Trainee also learns basic elements of Orthotics and Prosthetic so that they are able to assist Prosthetic and Orthotic Technician wherever necessary.

**Overall objectives**

To be able to apply the stated procedures, techniques and strategies for the treatment of persons with disability in a safe and competent manner.

**PAPER V: Rehabilitation Intervention I**

**Contents**

Unit	252 hours
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<ol style="list-style-type: none"> <li>1. Introduction to rehabilitation, Need's and Priorities of PWD'S.</li> <li>2. Range of Motion, Postural management and stretching Strengthening</li> <li>3. Pain Relief, Massage Bandaging</li> <li>4. Management of Abnormal Tone, Hand function</li> <li>5. Transfers ,Breathing activities (Respiratory treatments)</li> </ol>	
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## **Unit 1**

### **Description**

In this unit the trainee learns about the role of the Rehabilitation Therapy Assistant, Orthotic Technician and Prosthetic Technician within the rehabilitation team and how they can help the rehabilitation process and the importance of working collaboratively with the PWD and designing a rehabilitation programme according to the expressed needs and priorities of the PWD.

### **Objectives**

At the end of the unit the students will be able to:

1. Describe the rehabilitation process and describe the difference between impairment, activity limitation and participation restriction (International Classification of Functioning)
2. Describe the role of the Rehabilitation Therapy Assistant and explain how the therapy assistant can help people with disabilities as part of the rehabilitation process.
3. Describe the role of the Orthotic Technician and explain how orthoses can help people with disabilities as part of the rehabilitation process.
4. Describe the role of the Prosthetic Technician and explain how the prostheses can help people with disabilities as part of the rehabilitation process.
5. Describe the roles of members of the rehabilitation team.
6. Describe the difference between remedial and adaptive approaches in therapy
7. Define some of the simple therapy techniques that will be used on the course
8. Use a problem solving approach to their rehabilitation management
9. Describe and explain benefit of using an orthopaedic appliance and its effect on the other treatment programmes of rehabilitation.
10. Describe and explain the importance of early identification of the disability and the intervention process.
11. Describe importance of working towards PWDs goals
12. Describe the different activities of daily living, life skills and life roles of a person
13. List different activities of daily living, life skills and life roles that could be affected by disability
14. Demonstrate how they would work collaboratively with the PWD using the above to identify rehabilitation goal.

## **Unit 2**



## **Description**

In this unit the trainee learns what is range of motion, the different types of range of motion techniques, postural management and stretching, why it is important for functional activity and different ways to maintain and correct posture, including prevention and management of contractures and deformities., what muscle strengthening is and demonstrates how this can be done, with a focus on functional exercises/activities.

## **Objectives**

At the end of the unit the students will be able to:

1. Identify the indications for the use of passive range of motion, active assisted range of motion and active range of motion.
2. Identify major joints of the body and the movements available at each joint.
3. Demonstrate and practise passive range of motion and active assisted range of motion techniques
4. Demonstrate how to teach a person with a disability to show active range of motion exercises, through functional activity.
5. .Describe postural management and why it is important.
6. Describe the different ways to maintain good posture and prevent/manage contractures and deformities.
7. Describe when positioning, splinting, developmental aids, strengthening, active and passive stretching are appropriate and why.
8. Identify a service user who needs postural management and design and carry out an appropriate intervention programme for them.
9. Demonstrate muscle testing techniques.
10. Identify a person who will benefit from strengthening exercises
11. Describe how to progress strengthening exercises
12. Describe / Demonstrate functional exercises/activities to strengthen upper and lower limb muscle groups, using different types of muscle contractions.
13. Design and teach a home strengthening programme for a service user, using functional exercises and activities.

## **Unit 3**

### **Description**

In this unit the students will learn when hot and cold therapy are appropriate, how to apply them and when to refer someone to a doctor , basic principles of massage for oedema and scar management and the function of bandaging and how to apply bandages effectively for amputees, muscle strain and sprain.

### **Objectives**

At the end of the unit the students will be able to:

1. Know when and who they can help with pain relief
2. Understand the limits to their techniques.
3. Safely apply heat and cold techniques.
4. Refer the service user to a doctor when appropriate.
5. Describe when and why to do massage (for oedema and scars only)

6. Identify when not to do massage
7. Describe general guidelines on the application of massage
8. Demonstrate appropriate massage techniques for control of oedema and scar management.
9. Explain the purpose and indications for bandaging
10. Describe the general rules of bandaging
11. Demonstrate appropriate bandaging techniques for amputees, muscle strain and sprain.

## **Unit 4**

### **Description**

In this unit the trainee learns basic principles for treating adults & children with abnormal tone. This will include interventions for high & low tone, ataxia & athetosis, balance & coordination problems and they learn about different functions of hand and basic assessment and intervention for people with hand function limitations.

### **Objectives**

At the end of the unit the students will be able to:

1. Understand what can affect normal movement in a child/adult with neurological damage.
2. Carry out an intervention plan to improve the function of a child/adult with abnormal tone. This will include interventions for high & low tone, ataxia & athetosis, balance & coordination problems.
3. Describe what hand function is.
4. Demonstrate how different hand/wrist positions will reduce or improve hand function.
5. Assess hand function limitations and carry out appropriate intervention.

## **Unit 5**

### **Description**

This unit the trainee learns about different types of transfer and how to safely assist a PWD to transfer from one place to another and how to help a person with breathing problems.

### **Objectives**

At the end of the unit the trainee will be able to:

1. Explain the general rules for all transfers.
2. Describe and demonstrate methods of assisting a PWD with appropriate safe transfers using good back care techniques: bed mobility, lying to sitting, standing up, moving between chair/bed, getting on and off the floor
3. Describe what conditions can cause breathing problems and why.
4. Describe when and how you would teach different activities to help a person with a breathing problem.

## **PAPER VI: Rehabilitation Intervention II**

### **Contents**

Unit	252 hrs
<ol style="list-style-type: none"> <li>1. Developmental aids, walking aids, wheelchairs, prosthesis &amp; orthosis</li> <li>2. Activities of daily livings(ADL), aids for ADL</li> <li>3. Gait analysis &amp; training</li> <li>4. Therapeutic activities, functional activities, play.</li> <li>5. Home adaptation.</li> </ol>	

## **Unit 1**

### **Description**

In this unit the trainee learns how to make developmental aids for gross motor development, with simple modifications to meet individual needs. They learn about the different types of walking aids available to them and assess and prescribe and teach PWD how to use them. Also trainee learns the indication for wheelchair use. They learn how to measure and adapt wheelchairs and to give wheelchair training, according to the need of PWD and Rehabilitation Therapy Assistant learns a basic knowledge of Orthotic and Prosthetic to enable them to assist Orthotic & Prosthetic Technician to work as a part of the Rehabilitation team.

### **Objectives**

At the end of the unit the students will be able to:

1. Explain when different developmental aids are indicated and why timely follow-up is needed.
2. Explain the different process involved/ materials and tools required for making development aids.
3. Make simple designs of developmental aids for gross motor development: standing frame, special chair, corner seat, prone board.
4. Identify the walking aid that will meet the needs of an individual service user.
5. Correctly measure and fit the walking aid.
6. Demonstrate and teach the service user how to walk with the aid.
7. Demonstrate and teach how to go up and down stairs with a walking aid (if safe to do so).
8. Identify when to prescribe a wheelchair to person with disability.
9. Prescribe and fit an appropriate wheelchair for a PWD
10. Give wheelchair training to the service user.
11. Describe the common types of orthotic, prosthetic, mobility and rehabilitation aids.
12. Assist the orthotist and Prosthetist in their activities.
13. Do minor repairs to orthotic, prosthetic appliances, Mobility and Rehabilitation aids.
14. Help a PWD to use their appliance functionally.
15. Fabricate gaiters

## **Unit 2**

## **Description**

In this unit the trainee learns how to identify when a person has problems in their activities of daily living. By problem solving, they learn to focus on increasing independence in activities of daily living and they learn the indications for the use of aids for daily living. The trainee uses a problem solving approach to design and produce aids to make a particular activity possible for the person to be independent. Emphasis is placed on the use of locally available materials.

## **Objectives**

At the end of the unit the trainee will be able to:

1. Describe the different basic activities of daily living: eating and drinking, dressing, bathing and toileting, self-care
2. Carry out an assessment & make an intervention plan with the PWD, aimed at increasing independence in basic activities of daily living.
3. Demonstrate and teach a variety of interventions that will increase independence in activities of daily living.
4. Identify which aid(s) for daily living are appropriate for a particular person.
5. Make appropriate aids using locally available materials.

## **Unit 3**

### **Description**

In this unit the trainee learns the principles behind normal gait, the problems associated with an abnormal gait pattern and to improve/correct abnormal gait patterns.

### **Objectives**

At the end of the unit the students will be able to:

1. Describe normal gait and the main muscles groups used
2. Demonstrate activities that prepare a person for walking
3. Identify common abnormal gait pattern including those associated with prostheses and orthosis.
4. Describe the problems associated with an abnormal gait pattern and carry out a treatment programme to address it.

## **Unit 4**

### **Description**

In this unit the students learn the importance of therapeutic activity within therapy intervention. The trainee learns how to analyse an activity and to select an appropriate activity for a given problem, the importance of using functional activities and play within therapy and how to put this into practice.

### **Objectives**

At the end of the unit the trainee will be able to:

1. Select activities that are age appropriate, therapeutic, goal directed and purposeful.

2. Analyse an activity and identify the qualities of the therapeutic activity.
3. Explain and demonstrate how functional activity and play has a central role in therapy intervention.
4. With the PWD, design and carry out an intervention plan using functional activity and/or play to achieve their goals.

## **Unit 5**

### **Description**

In this unit the students learn how a person with a disability can be more independent in and around their home through the use of adaptations

### **Objectives**

At the end of the unit the students will be able to:

1. Assess barriers in the home.
2. Identify adaptation(s) which will reduce/remove the barriers within the home.

## **4.3 Integration/Clinical Practise**

### **Overall Description**

The integrative studies unit provides the students with the opportunity to link the skills and knowledge learnt throughout the course and focus on their individual needs as learners.

Clinical Experience is divided into 2 modules. The first is training institute based and here students work with PWDs either in the therapy unit and workshop within the campus or the CBR project area.

The second module is divided into 2 placements at rural organisations. These provide students with experience in a rural environment with the use of locally available material

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**Paper 7**

**CLINICAL PLACEMENT**

**216 hours**

**Credits 6**

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### **Description**

This module represents the ongoing clinical experience students have in the training institute workshop and therapy unit and in the community around training institute throughout the whole of their years study. Students already have considerable practical experience in the workshop and in the field during the specific modules already covered. During this module they gradually develop their ability to integrate knowledge and skills from all other modules.

They are required to carry out supervised assessment and Orthotic intervention for the PWD who are referred to training institute. They document their client related activities, liaise with other members of the rehabilitation team as appropriate and work collaboratively with each client they treat to meet their goals. Skilled and experienced training institute staff are on hand to offer supervision and on the job training throughout this module with the aim that as the students

proficiency are increased, levels of support are withdrawn to develop trainee's own confidence and decision making capacity.

## **Objectives**

At the end of this course trainee will be able to:

1. Assess the need for, provide and evaluate prosthetic appliances for PWDs who are referred to training institute by direct placement in therapy unit or CBR Project area (Under supervision).
2. Communicate appropriately with the PWD, their family and any other professionals involved
3. Make any necessary referrals and to visit referral centre with CBR team as per the need
4. Document their intervention and plan
5. Work within their limitations and maintain the tools, machineries and equipments
6. Behave professionally
7. To support the store incharge to manage to day to day activity of the store
8. Assist the store incharge in making the purchase list and support the purchase team in doing the purchasing

## **Integrative Studies**

### **Description**

It represents the time spent by students carrying out individual work, group project work and independent study and practise. It is designed so that students are able to reflect on the learning through the taught aspects of the modules already stated.

A learner-centred approach is used so that students are able to use some of this time to work on their individual areas of need which may be specific to the context they will return to or may be specific to parts of the course they find difficult or are particularly interested in.

This part contributes to the development of the problem solving skills required to provide Therapy service to individual people with disabilities.

### **Objectives**

Objectives are negotiated between students themselves, their personal tutors and the Senior Tutor for their course according to their individual learning needs

### **Contents**

Contents are dependent on Students expressed needs but could include topics such as:

- Designing a Therapy unit layout
- Collaborative case studies
- Students Designing information leaflets, handouts, models, awareness posters
- Project to describe students' organisations infrastructure
- Designing a mobility training programme for a person with a visual impairment
- Students experiencing and reflecting on the functional implications of wearing an orthosis through Simulation activities.

### Description

The experience of working with a rural organisation provides opportunity for students to experience rehabilitation outside the training institute campus and field area. The organisations are predominantly based in rural areas which mean that students have opportunity to experience working in a different environment. They are able to apply basic concepts and principles to practical situations in the community and develop proficiency in the fabrication of orthosis using locally available resources.

Students are exposed to basic principles of management within this context as some assistants may be required to organise the day-to-day management of small rural rehabilitation units.

### Objectives

By the end of this module the trainee will be able to:

1. Observe and take part in the awareness programme conducted by the organization in the community. ( if possible) This could include:
  - a. Early identification and Intervention of Disabilities
  - b. Maintenance and repair of Aids & Appliances
2. Students will be involved in the documentation procedure followed by Organization if needed.
3. Behave in a professional manner throughout the visit.
4. Communicate effectively with PWDs, family, and members of partner organisation. .(in case of language problem with support)
5. Take part in the rehabilitation intervention done and followed by the organization in the community level.

### Contents

At the end of the partner placement the therapy students will be able to:

#### Placement I (Two Weeks)

1. Record the information's about organization
2. Observe/Participate in Awareness programme and visits to Primary health centers, Referral centers and Special schools in the community. ( if possible)
3. Prepare 1 case study in relation to poverty context
4. Identify the disability and their problems
5. Assist in planning and carrying out basic therapy intervention for PWD's.
6. Assist in carrying out simple repairs of Aids & Appliances.
7. Record information's on Prosthetic & Orthotic and therapy services implementation and general description of the therapy unit layout of the partner organization including therapy equipments (if present).

## Placement II (Two Weeks)

1. Assess a person with a disability
2. List problem areas
3. Set goals with the client and family
4. Carry out therapy Planning, intervention. Eg fitment of orthosis/prosthesis, gait training, ADL, Developmental aids and Home modification
5. Fabricate assistive/adaptive devices (If required)
6. Take part in the rehabilitation intervention done and followed by the organization in the community level.
7. Carry out minor repairs at the doorstep of the PWD/Workshop
8. Provide information, advice and training to PWD and their carers

## 4.4 Supporting Studies

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<b>Supporting Studies</b>		<b>71 hours</b>
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<b>Unit 1</b>	<b>MATHEMATICS</b>	<b>6 hours</b>
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### Description

The contents of this course are based on the needs of the students. This module also focuses on the simple mathematics and applied geometry, which will enable students to perform simple mathematical calculations, measure simple angles and maintain a written record in the form a graphical data. This module is optional for the training institute to conduct the following session. This module is not evaluated in the final examination.

### Objectives

At the end of the module the students will be able to:

1. Explain/describe in their own words the need for them to understand applied mathematics.
2. Elementary mathematics

<b>Unit 2</b>	<b>DRAWING AND SKETCHING</b>	<b>6 hours</b>
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### Description

In this unit the trainee learns the different methods of representation of ideas through simple sketches and drawings. They learn to use drawing and sketches to explain technical concepts/ideas.

### Objectives

At the end of the unit the trainee will be able to:

1. Demonstrate the different movements of body parts, weight bearing and non-weight bearing positions of the human body in context with the effect of gravity and the extent of deformity through sketches and models.
2. Draw simple sketches and explain the different orthopaedic conditions along with the sketches of appropriate appliances.



## Contents

- Simple sketches of Human Body parts.
- Simple sketches of the human body in the different planes.
- Sketches of the human body in weight bearing and non weight bearing positions and explaining the effect of the gravity on the body during the different positions.
- Drawing sketches of the different orthopaedic conditions

## Unit 3

## COMPUTER APPLICATIONS

19 hours

### Description

In this course the students gain a basic knowledge of computing. This will enable them to make use of computers for simple filing system of the day to day activities of the organisation and also to maintain and store records (data storing).

### Objectives

At the end of the module the students will be able to:

1. Explain why a basic knowledge of computing will be useful to them.
2. Describe what basic computer terms mean.
3. Use Windows, Word and Excel
4. Use the Internet.
5. Describe what a computer virus is.

### Contents

- Introduction to computers.
- Hardware and software.
- Terminology
- Use of Windows, Word and Excel.
- Applications important for the Rehabilitation Therapy Trainee – how to input data, write reports.
- Internet
- Antivirus packages

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## Unit 4

## ENGLISH

40 hours

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### Overall Description

The contents of this section are based on the needs of the students. The ultimate aim is for the students to understand the literature/text materials and lectures required for their course, to record the necessary information for documentation in English and to manage functional day to day communication

### Overall Objectives

At the end of the section the students will be able to:

3. Explain/describe in their own words the need for them to understand the English language and applied mathematics.

4. Collect/document any information / graphical data to analyse and understand any situation / condition of persons with disabilities in the community in the English language.
5. Describe/explain their own role in the rehabilitation field in English.
6. Speak in a group and be able to explain their ideas in English.

## **SECTION 5 - TEACHING MATERIALS**

### **Core Modules**

#### **Recommended Reading**

- Merial Norris(VSO), 2001: Rehabilitation Therapy Assistant Manual- Mobility India
- David Werner :Disabled Village Children-A Guide For Community Health Workers, Rehabilitation Workers And Families: VSO
- David Werner, 1994:Where There Is No Doctor - A Health Guide Book-VHAI, New Delhi
- Action on Disability and Development (ADD) India, Building Abilities-A Handbook To Work With People With Disability – ADD India
- The Spastics Society of Tamilnadu, 2000:Towards Inclusive Communities: Spastics Society of Tamil Nadu, India
- Sanchar-An Experience Of Community-Based Rehabilitation Of Disability – Sanchar, West Bengal, India-Handouts
- Brian O' Toole and Geraldine Maison-Halls , 1996: Community Action On Disability-Guyana Community Based Rehabilitation Programme – Guyana National Rehabilitation Committee, Guyana
- Manual For CBR Workers About Orthosis /Crutches/ Speech & Hearing/ Disability)- Handouts
- Barbara Decleire , Addis Anbaba,2002: Management Of Cerebral Palsy In Developing Countries-Handouts
- Prof .Dr. Soeharso Community Based Rehabilitation Development & Training Centre, Indonesia, ( 1995): Training Materials For CBR Workers : Indonesia

#### **Reference books**

- Anne Hope and Sally Timmel, 1995: Training For Transformation-A Handbook For Community Workers-Vol-I to Vol III – Mambo Press
- WHO, Swedish Organisation of Disabled Persons International Aid Association-2002:Community Based Rehabilitation As We Have Experienced It Voices Of PWD Part-I & Part 2 - WHO, SHIA
- Inderbir Singh 2002:Essentials Of Anatomy : Jaypee Brothers Medical Publishers
- Wynn Kapit/ Lawrence M.Elson 1993: The Anatomy Colouring Book : Addison-Wesley Educational Publishers, Inc.
- Evelyn Pearce 1988:Anatomy And Physiology For Nurses : Jaypee Brothers, India
- R.S.Winwood And J.L.Smith 1995:Anatomy And Physiology For Nurses 6<sup>th</sup> edition,ELBS edition

- Ab Taly, Bm Maheswarappa, Kp Sivaraman Nair, Uk Syam, T.Murali, 2001: Foundations And Techniques In Neurological Rehabilitation – National Institute of Mental Health and Neuro Science, Bangalore
- Marion Frost And Dr. Ajay Sharma:From Birth To Five Years-Children's Development Progress –Handouts
- Ture Jonsson :Inclusive Education: United Nations Development Programme
- WHO, 1992:The Education Of Mid-Level Rehabilitation Workers- Rehabilitation World Health Organisation
- WHO 1991:Guidelines For Translation And Adaptation Of The Manual-"Training In The Community For People With Disabilities"- WHO
- Promoting Independence Of People With Disabilities Due To Mental Disorders ( A Guide For Rehabilitation In Primary Health Care-WHO
- Ajit K.Dalal, Namita Pande, Nisha Dhawan: The Mind Matters-Disability Attitudes And Community Based Rehabilitation -
- Management Of The Child With A Serious Infection Or Severe Malnutrition
- Poverty And Health – WHO
- WHO, UNICEF :Primary Health Care: WHO, UNICEF
- New Delhi: St. John- “First aid to the injured”
- The mind matters: disability attitudes and community based rehabilitation.-- Allahabad: Centre of advanced study of allahabad, 2000.
- Summit of the mind: all india cross- disability convention. New Delhi: Rehabilitation Council of India, cop.2004.
- Ante natal care and prevention of disabilities.-- Bangalore: ADD India.
- International classification of functioning and disability: Beta-2 Draft Short Version.-- Geneva, Switzerland: WHO, 1999.
- Rural rehabilitation workers and rehabilitation workers training manual(n.p.r.p.d) project.-- Banglore: Disable Welfare Department.
- From birth to five years: children's developmental progress.--3rd ed. ed.-- London and New York: Routledge, 1973.
- Prevention of disabilities: practical guidebook 1.-- New Delhi, 2002.
- Manual of mental health for multipurpose workers in kannada.--2nd ed. Bangalore: NIMHANS, 1990.
- Health children steps.-- Dr. Veda Zachariah Bangalore: Sanjivnee Trust
- Taytanakke mettilugalu.-- Sanjivini Trust Bangalore:
- Simple equipment to help people with disabilities: training materials for community based rehabilitation worker.-- Indonesia: Prof. Dr. Soeharso Community Based Rehabilitation, 1995.

## **Specialised Modules**

### **Recommended Reading**

- Serge Rochatte, Handicap International (1990): Therapy Assistant Manual-Vol-I to Vol IV, France: Handicap International
- Nancie R Fannie (1997):Handling The Young Child With CP At Home-3rd Edition, Butterworth Heinemann, MA

- Anjana Jha, Calcutta(1995):Toileting, Your Baby, Physical Manage, Vocational Training, Behaviour Management, Cleaning For Cerebral Palsy, Indian Institute of Cerebral Palsy, Calcutta
- WHO, UNCF and Rehabilitation Unit, Ministry pf Health, Zimbabwe (1997): Let's Communicate ( A Handbook For People Working With Children With Communication Difficulties)-Communication, Assessment, Goal Planning, Mental Handicap, CP, Hearing Impairment, Multiple Disability, Geneva
- E. Helander(Geneva), P.Mendis(Srilanka), G.Nelson(Sweden), and A.Goerd(Geneva),1989:Training Package For A Family Member -WHO, Geneva
- World Confederation for Physical Therapy, WHO, World Federation of Occupational Therapist , 1996:Promoting The Development Of Infants And young Children With Cerebral Palsy , Spina Bifida And Hydrocephalus-A Guide For Mid-Level Rehabilitation Workers- WHO, Geneva
- Archie Hinchecliffe, 2003:Children With Cerebral Palsy- A Manual For Therapists, Parents And Community Workers: ITDG , London
- David Dilli :Handbook Accessibility And Tool Adaptations For Disabled Workers In Post Conflict And Developing Countries: International Labout Office, Geneva
- Mr. Leslie gardner(UK), Prof S.N.Tandon amd Prof. D.Mohan (Delhi):A Manual Of Aids For The Multiply Handicapped –Upkaran: The Spastics Society of India, Bombay
- Economic and Social commission for Asia and the Pacific 1995:Promotion Of Non-Handicapping Physical Environments For Disabled Persons: Case-Studies - United Nations
- Indian Institute of CerebralPalsy:- “Feeding for the child with cerebral palsy”, “Play for the child with cerebral palsy” , “Physical management for the child with cerebral palsy”, “Communication for the child with cerebral palsy” ,” Behaviour management”, “Toileting for the child with cerebral palsy “.
- Human walking.-- Baltimore: [Williams & Wilkins], [cop. 1994].
- Measurement of joint motion: a guide to goniometry.--3rd ed. ed. - Philadelphia: F.A.Davix Company, cop.2003.
- Muscles testing and function: with posture and pain.--4th ed. Philadelphia: Lippincott Williams & Wilkins, cop.1993

## **Reference books**

- Prof .Dr. Soeharso Community Based Rehabilitation Development & Training Centre, Indonesia, ( 1995) -Training Materials For CBR Workers: Indonesia
- David J.Dandy :Essential Orthopaedics And Trauma-Third Edition: Churchell Living Stone
- Arthur C. Guyton And John E.Hall( Mississippi) 2001:Text Book Of Medical Physiology: W.B.Saunders Company
- Catherine A. Trombly and Mary Vining Radomski 2002: Occupational Therapy 5<sup>th</sup> Edition: Lippincott Williams And Wilkins Company
- Lorraine Williams Pedreth 1996:Occupational Therapy Practice Skills For Physical Dysfunction 4th Edition – MOSBY, Missouri
- Jane Case-Smith, Anne S.Allen and Pat Nuse Pratt, 1996: Occupational Therapy for children: MOSBY, Missouri
- M.Dena Gardiner 2000:The Principles Of Exercise Therapy-IV Edition: CBS Publishers & Distributor, New Delhi

- Patricia M. Daviewns , 2000: Steps To Follow IInd Edition:Springer, Germany
- Marian E Tidswell,1992:Cash Textbook Of Orthopaedics And Rheumatology For Physiotherapists 2nd Edition :Jaypee Brothers, New Delhi
- Patricia A Downie 1992: Cash's Textbook Of Neurology For Physiotherapists-4th Edition :Jaypee Brothers, New Delhi
- WHO 1995:Guidelines For The Prevention Of Deformities In Polio: Geneva
- Florence Peterson Kendall, Elizabeth Kendal McCreary and Patricia Geise Provance, 1983: Muscles Testing And Function :Lippincott Williams & Wilkins
- Suzanne "Tink" Martin and Mary Kessler(2000): Neurological Intervention For Physical Therapist Assistants: W.B.Saunders Company
- Barbara Engstrom and Catherine Van De Ven (2001) Therapy For Amputees (Third Edition):Churchill Livingstone
- John H. Bowker And Cameron B.Hall :Normal Human Gait
- WHO United States Department Of Defence Drucker Brain Injury Centre: Rehabilitation for Persons with Traumatic Brain Injury: WHO, Geneva
- LOTCA loewenstein occupational therapy “cognitive assessment”
- Promoting independence following a stroke: World Health Organisation
- Physical therapy in leprosy for paramedicals:- American Leprosy Missions
- Therapeutic exercise: foundations and techniques.—3<sup>rd</sup>, 4<sup>th</sup>, ed. Philadelphia: F.A Davis Company
- Physiotherapy in rheumatology.-- Oxford: Blackwell Publishing Ltd., 1980
- Adult hemiplegia: evaluation and treatment. -- London: William Heinemann Medical Books Limited, cop.1978
- Principles and practices of therapeutic massage.-- New Delhi: Jaypee Brothers Medical Publishers (P) Ltd
- Practical exercise therapy.--2nd ed. ed.-- Oxford: Blackwell Scientific Publication,
- Physiotherapy in paediatrics.--3rd ed. ed. -- Oxford: Butterworth-Heinemann, cop.1995
- Chidren with cerebral palsy: a manual for therapists, parents and community workers.-- London: ITDG Publishing, cop.2003.
- Treatment of cerebral palsy and motor delay.--4th ed. ed. -- USA: Blackwell Publishing Ltd., cop.2004.
- Management of painful musculoskeletal conditions.-- Dr. A.B.Samsi. Mumbai.
- Self -help manual managing back pain: daily activities guide for back pain patients.-- Caska, MN: The Saunders Group , Inc., 1989.
- Physical therapy techniques and devices France: Handicap National, 1990.
- Exercises for lower-limb amputees.-- Birmingham, West Midlands: West Midlands Rehabilitation Center
- Handbook for paraplegic and quadriplegic individuals.-- California: National Spinal Cord Injury Association.
- Manual therapy in a clinincal reasoning perspective.-- Bangalore: Federation of India Manual Therapists, 2007.
- Hansen's disease: (lerosy).-- Bangalore: Sumana halli society
- Better care of mentally disabled children. 1st ed. ed.-- New Delhi: Voluntary Health Association of India, 1989.
- Handbook on the late effects of poliomyelitis: for physicians and survivors. -- Missouri, U.S.A.: Gazette International Networking Institute, 1984.

- Poliomyelitis: a guide for developing countries - including appliances and.-- Edinburgh, London: Churchill Livingstone, 1975.
- Understanding learning disabilities. -- Mumbai: ShriMathi Nathibai Damodar Thakrassi Women s Unive, [1997]

## **Supporting Modules**

- English Story Book
  - Getting Started-MS windows 2000 Server
  - Windows 95 Programming For Dummies
  - Power Point For Windows 95 Step By Step
  - Microsoft Windows 95 Internet Kit- Bryan Pfaffenberger
-