

Curriculum  
[Short term]  
For  
**Physical Rehabilitation  
Assistant**  
(PRA)



Council for Technical Education and Vocational Education  
Curriculum Development Division  
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**Introduction:**

This competency based 'Curriculum for Physical Rehabilitation Assistant' is designed to produce basic level technical workforce in the field of physiotherapy and rehabilitation equipped with skills, knowledge and positive attitudes related to physical rehabilitation in order to meet the demand of such workforce in the country so as to contribute in the national streamline of poverty reduction in Nepal.

**Aims**

The main aim of this curricular program is to produce skilled workforce in the field of physiotherapy and rehabilitation by providing training to the paramedics and link them to employment opportunities. The aims of this guide are:-

- To produce basic level technical workforce in the area of physiotherapy and rehabilitation
- To produce such technical workforce who will be able to serve community people through the application of the physiotherapy and rehabilitation techniques being an entrepreneur.

**Objectives:**

After the completion of this training program, the trainees will be able to:

- Asses patients
- Familiarize with Rehabilitation
- Assist to provide rehabilitation services in their own community
- Assist in managing rehabilitation centre
- Handle tools/materials/equipment
- Familiarize with basic anatomy and physiology of some systems of human body
- Familiarize with body mechanics
- Assist physically challenged person
- Assist to perform therapeutic exercises
- Assist correction of deformities.
- Assist to apply assistive devices
- Assist rehabilitation of orthopedic cases
- Assist rehabilitation of neurological cases
- Assist to manage bed ridden patients
- Assist to manage abnormal gaits
- Communicate with others

**Description:**

This curriculum provides skills and knowledge necessary for Physical Rehabilitation Assistants. There will be both demonstration by trainers/instructors and opportunity by trainees to carry out the skills/tasks necessary for this level of technical workforce. Trainees will practice and learn skills by using typical tools, materials and equipment necessary for the program.

On successful completion of this training, the trainees will be able to assist in managing rehabilitation centers, handle tools/materials/equipment, familiarize with body mechanics, assist assessment of patients, assist physically challenged person, assist to perform therapeutic exercises, assist to correct deformities, assist to apply assistive devices, assist rehabilitation of orthopedic cases , assist rehabilitation of neurological cases, assist to manage bed ridden, assist to manage abnormal gaits, and communicate with others.

## Course Structure

SN	Modules	Nature	Hours		
			Th.	Pr.	Tot
1.	Introduction of Physical Rehabilitation	T + P	10	10	20
2.	Handling of tools, materials & equipment	T + P	4	12	16
3.	Human anatomy and physiology	T + P	20	10	30
4.	Assessment of patients	T + P	2	8	10
5.	Assistance to physically challenged persons	T + P	10	40	50
6.	Therapeutic exercises	T + P	10	30	40
7.	Rehabilitation of orthopedic cases	T + P	10	40	50
8.	Rehabilitation of neurological cases	T + P	10	40	50
9.	Management of bed ridden	T + P	4	10	14
10.	Communication and professionalism development	T + P	4	6	10
11.	Entrepreneurship Development	T + P	18	22	40
12.	<i>Sub-total:</i>		<b>59</b>	<b>241</b>	<b>330</b>
13.	On the job training [OJT]	P	-	160	160
14.	<b>Total:</b>		<b>59</b>	<b>401</b>	<b>490</b>

**Note:** One month's OJT = 160 hours

### Duration:

The total duration of the program will 330 hours plus one month (160 hrs) OJT

### Target group:

The target group for this training will be the candidate with 10<sup>th</sup> class passed.

### Group size:

The group size of this training program will be not more than 20.

### Target location:

The target location of this training program will be all over Nepal.

### Medium of Instruction:

The medium of instruction for this training program will be Nepali or English or both.

### Pattern of attendance:

The trainees should have 80% attendance in theory classes and 90% in Practical (Performance) to be eligible for internal assessment and final examinations.

### Entry criteria:

Individuals who meet the following criteria will be allowed to enter in this curricular program:

- Persons with 10<sup>th</sup> class passed
- Physically and mentally fit
- Age above 16 years

**Certificate requirement:**

The related training institute will provide the certificate of '**Physical Rehabilitation Assistant**' to those individuals who successfully complete all the tasks with their related technical knowledge specified in this curriculum.

**Student Evaluation Details:**

- Continuous evaluation of the trainees' performance is to be done by the related instructor/trainer to ensure the proficiency over each competency.
- Related technical knowledge learnt by the trainees will be evaluated through written or oral tests as per the nature of the content

**Trainers Qualification:**

- Bachelor's degree[BPT] / Diploma [DPT] in physiotherapy
- Good communicative & instructional skills
- Experience in the related field.

**Trainer – Trainees Ratio:**

- 1:10 for practical classes
- Depends on the nature of subject matter and class room situation for theory classes.

**Physical facilities:**

- Well-equipped and spacious class rooms
- Well-equipped physiotherapy and rehabilitation center with in and out patient service
- Storing facility
- Well-equipped multipurpose room
- Computer facility
- Telephone facility
- Toilet facility
- Electricity facility
- Clean water supply facility
- Library facility
- Vehicle [optional]
- Canteen [optional]
- Hostel [optional]

**List of tools, materials, and equipment:**

- |                                    |                     |                        |
|------------------------------------|---------------------|------------------------|
| ▪ Auxiliary crutch                 | ▪ Leg exerciser     | ▪ Sphygmomanometer     |
| ▪ Elbow crutch.                    | ▪ Arm exerciser.    | ▪ Pelvic traction      |
| ▪ Sticks                           | ▪ Ankle exerciser.  | ▪ Cervical traction    |
| ▪ Frame (walker)                   | ▪ Heel exerciser.   | ▪ Electric heating pad |
| ▪ Wheel chair                      | ▪ Reeducation board | ▪ Paraffin wax bath    |
| ▪ Splints                          | ▪ Finger exerciser  | ▪ Hydroculator         |
| ▪ Knee braces (static and Dynamic) | ▪ CP chair          | ▪ Balance board        |
| ▪ Spinal Braces                    | ▪ CP table          | ▪ Prone board          |
| ▪ Chest belt                       | ▪ Standing frames   | ▪ Electronic massager. |
| ▪ Abdominal belt                   | ▪ Tilting table     | ▪ Powder               |
| ▪ Parallel bar.                    | ▪ Overhead pulley   | ▪ Oil                  |
| ▪ Quadriceps.                      | ▪ Shoulder wheel    | ▪ Weigh cuffs          |
| ▪ Theraband.                       | ▪ Exercise bed      | ▪ Weighing machine     |
| ▪ Gripper                          | ▪ Examination bed   | ▪ Hot water            |
| ▪ Spring                           | ▪ Pillows           | ▪ Cold water           |
| ▪ Physiotherapy ball               | ▪ Measuring tape    | ▪ Ice                  |
| ▪ Static cycle.                    | ▪ Goniometer        | ▪ Mat for exercise     |
|                                    | ▪ Thermometer       |                        |

## Module 1: Introduction of Physical Rehabilitation

### Description:

It consists of the skills and knowledge related to the rehabilitation, physical rehabilitation and management of rehabilitation center as well as community based rehabilitation. Each task structure consists of steps, terminal performance objective [TPO], and related technical knowledge concerned with the task.

### Objectives:

After its completion the trainees will be able to:

- familiarize with rehabilitation
- assist in managing rehabilitation centre
- assist to manage space
- assist to manage tools/equipment / materials
- assist in directing rehabilitation centre/department
- assist in controlling rehabilitation centre/department
- Assist to manage community based rehabilitation

### Tasks:

1. Familiarize with rehabilitation
2. Familiarize with Impairment, Disability and Handicap.
3. Assist in managing rehabilitation centre
4. Assist to manage space
5. Assist to manage tools / equipment / materials
6. Assist in directing rehabilitation centre/department
7. Assist in controlling rehabilitation center/department
8. Assist to manage community based rehabilitation

#### **Task 1:** Familiarize with rehabilitation

<b>Performance steps</b>	<b>Terminal performance objectives</b>	<b>Related technical knowledge</b>
<ol style="list-style-type: none"> <li>1. Familiarize with the term rehabilitation and rehabilitation therapy</li> <li>2. Familiarize with types of rehabilitation</li> <li>3. Familiarize with the role of physical rehabilitation assistants</li> <li>4. Familiarize with the organizations working in rehabilitation in Nepal</li> <li>5. Assist in making a list of human resources to be needed for rehabilitation of physically challenged or differently able persons.</li> </ol>	<p><b><u>Condition (Given):</u></b></p> <p>Books and handout.</p> <p><b><u>Task (What):</u></b></p> <p>Familiarize with rehabilitation</p> <p><b><u>Standard(How well):</u></b></p> <ul style="list-style-type: none"> <li>• Familiarized with physical rehabilitation and differentiation between Impairment, Disability and Handicap</li> </ul>	<p><b><u>Rehabilitation:</u></b></p> <ul style="list-style-type: none"> <li>• Definition, Types and purpose of rehabilitation</li> <li>• Different between Impairment, Disability and Handicap</li> <li>• Different between clinical and community based rehabilitation</li> <li>• Organizations' involved in rehabilitation</li> <li>• Human resource</li> </ul>

Tools / Equipment / Materials: Books, hands out, paper, pen.

**Task 2: Familiarize with Impairment, Disability and Handicap.**

<b>Performance steps</b>	<b>Terminal performance objectives</b>	<b>Related technical knowledge</b>
<ul style="list-style-type: none"> <li>• Familiarize with Impairment, Disability and Handicap</li> <li>• Familiarize with Laws and Acts related to Disability rights</li> <li>• Identify the types of disabilities</li> <li>• Familiarize with ADL</li> <li>• Identify Aids for ADL</li> <li>• Familiarize with home adaptations for ADL</li> <li>• Keep records</li> <li>• Refer to higher centre if not improved.</li> </ul>	<p><b><u>Condition (Given):</u></b> Client.</p> <p><b><u>Task (What):</u></b> Familiarize Impairment, Disability and Handicap.</p> <p><b><u>Standards (How well):</u></b></p> <ul style="list-style-type: none"> <li>• Well understanding of Impairment, Disability and Handicap.</li> </ul>	<p><b><u>Impairment, Disability and Handicap:</u></b></p> <ul style="list-style-type: none"> <li>• Differentiation between Impairment, Disability and Handicap</li> <li>• Laws and Acts related to Disability rights</li> <li>• Advocacy for disability</li> <li>• ADL, Independent and dependent ADL</li> <li>• Home adaptations for ADL</li> </ul>

Tools / equipments / materials: Books, Handouts, Pen, Paper

**Task 3: Assist in planning rehabilitation centre**

<b>Performance steps</b>	<b>Terminal performance objectives</b>	<b>Related technical knowledge</b>
<ol style="list-style-type: none"> <li>1. Receive instructions.</li> <li>2. Assist in identifying the services to be provided in a rehabilitation centre</li> <li>3. Assist in making a list of services that can be provided in the centre.</li> <li>4. Assist in making a list of human resources to be needed.</li> <li>5. Assist in making a rule/code of ethic for staffs.</li> <li>6. Assist in making a rule for clients.</li> <li>7. Observe and conform your plans and rules.</li> <li>8. Keep records.</li> </ol>	<p><b><u>Condition (Given):</u></b> Books and handout.</p> <p><b><u>Task (What):</u></b> Assist in planning rehabilitation Centre.</p> <p><b><u>Standard (How well):</u></b></p> <ul style="list-style-type: none"> <li>• Prepared a plan of a new rehabilitation centre.</li> <li>• Followed all the steps in sequence.</li> </ul>	<p><b><u>Planning rehabilitation centre:</u></b></p> <ul style="list-style-type: none"> <li>• Services in rehabilitation centre</li> <li>• Human resource</li> <li>• Rule/code of ethics for staffs</li> <li>• Rules for clients</li> </ul>

Tools / Equipments / Materials: Books, hands out, paper, pen.

**Task 4:** Assist to manage space

<b>Performance steps</b>	<b>Terminal performance objectives</b>	<b>Related technical knowledge</b>
<ol style="list-style-type: none"> <li>1. Receive instructions.</li> <li>2. Assist to identify the space.</li> <li>3. Assist to measure the space.</li> <li>4. Assist to make a plan of space for patient examination.</li> <li>5. Assist to make a plan of space for treatment, exercise and rehabilitation.</li> <li>6. Assist to make a plan of space for equipment installation.</li> <li>7. Assist to make a plan of space for office work.</li> <li>8. Assist to make a plan of space for public relation.</li> <li>9. Complete the overall plan of space</li> <li>10. Keep records.</li> </ol>	<p><b><u>Condition (Given):</u></b> Space and tools.</p> <p><b><u>Task (What):</u></b> Assist to manage space.</p> <p><b><u>Standards ( How well):</u></b></p> <ul style="list-style-type: none"> <li>• Managed the available space for required equipment and facilities.</li> <li>• All the steps performed in sequence.</li> </ul>	<p><b><u>Space management:</u></b></p> <ul style="list-style-type: none"> <li>• Concept of space management</li> <li>• Space calculation</li> <li>• Plan of space</li> </ul>

Tools / Equipments: Measuring tape, measuring scale, Drawing paper, Pencil.

Safety: Check the floor whether it is slippery, wet, dusty or rough.



**Task 5:** Assist to manage tools/equipment/materials

<b>Performance steps</b>	<b>Terminal performance objectives</b>	<b>Related technical knowledge</b>
<ol style="list-style-type: none"> <li>1. Receive instruction</li> <li>2. Assist to identify the tools /equipment/materials.</li> <li>3. Assist to make a list of tools /equipment / materials as needed.</li> <li>4. Assist to identify manufacturer / supplier.</li> <li>5. Assist to make a contact with supplier.</li> <li>6. Assist to order the tools/ equipments /materials as needed.</li> <li>7. Assist to receive tools / equipments / materials as ordered.</li> <li>8. Assist to place them in proper places as your previous plan.</li> <li>9. Assist to test each equipment whether they work properly.</li> <li>10. Assist check each tools, equipments whether they are as required.</li> <li>11. Assist to reconfirm placement of tools / equipment/materials.</li> <li>12. Assist to reconfirm the condition of tools/ equipments/ materials.</li> <li>13. Keep records.</li> </ol>	<p><b><u>Condition (Given):</u></b> Space and tools.</p> <p><b><u>Task (What):</u></b> Assist to manage tools /equipment /materials.</p> <p><b><u>Standards (How well):</u></b></p> <ul style="list-style-type: none"> <li>• Kept all equipment in proper places.</li> <li>• All the steps followed in sequence.</li> </ul>	<p><b><u>Managing tools / equipment / materials:</u></b></p> <ul style="list-style-type: none"> <li>• Identification of tools/ equipment and materials</li> <li>• Manufacturer and suppliers.</li> <li>• Concept of contract</li> <li>• Placement of tools/equipment/ materials in the department.</li> <li>• Testing and checking of tools, equipment and materials</li> </ul>

Tools/Equipment/Materials: Refer appendices

**Task 6:** Assist in directing rehabilitation centre/department.

<b>Performance steps</b>	<b>Terminal performance objectives</b>	<b>Related technical knowledge</b>
<ol style="list-style-type: none"> <li>1. Receive instruction</li> <li>2. Assist to enlist objectives</li> <li>3. Assist to clarify objectives</li> <li>4. Assist to lead the activities</li> <li>5. Assist to motivate for the smooth running of the activities</li> <li>6. Assist to establish reward and punishment systems</li> <li>7. Assist to execute the reward and punishment systems</li> <li>8. Assist to direct activities of the centre to meet its goals</li> <li>9. Keep records</li> </ol>	<p><b><u>Condition (Given):</u></b> Rehab center and its objectives</p> <p><b><u>Task (What):</u></b> Assist in directing rehabilitation centre/department</p> <p><b><u>Standards (How well):</u></b></p> <ul style="list-style-type: none"> <li>• All task steps followed in sequential order</li> <li>• Assisted to direct activities of the centre/department in the direction of fulfilling its aims and objectives.</li> <li>• Assisted to apply techniques of leadership and motivation</li> </ul>	<p><b><u>Directing rehabilitation centre/department:</u></b></p> <ul style="list-style-type: none"> <li>• Objectives of the center</li> <li>• Leading the activities and techniques of leadership</li> <li>• Motivation and techniques of motivation for the smooth running of the activities</li> <li>• Reward and punishment systems</li> <li>• Execution of the reward and punishment systems</li> <li>• Need to direct activities of the centre to meet its goals</li> <li>• Keeping records</li> </ul>

**Task 7: Assist in controlling rehabilitation centre/department**

<b>Performance steps</b>	<b>Terminal performance objectives</b>	<b>Related technical knowledge</b>
<ol style="list-style-type: none"> <li>1. Receive instruction</li> <li>2. Define controlling</li> <li>3. List objectives</li> <li>4. Assist to find out actual activities performed</li> <li>5. Assist to compare the actual activities performed with the objectives</li> <li>6. Assist to suggest corrective measures</li> <li>7. Assist to execute the corrective measures</li> <li>8. Assist to control the overall activities towards the streamline of objectives fulfillment</li> <li>9. Keep records</li> </ol>	<p><b><u>Condition (Given):</u></b> Rehab center and its objectives</p> <p><b><u>Task (What):</u></b> Assist in controlling rehabilitation centre/department</p> <p><b><u>Standards (How well):</u></b></p> <ul style="list-style-type: none"> <li>• All task steps followed in sequential order</li> <li>• Assisted to control activities of the centre/department in the direction of fulfilling its aims and objectives.</li> <li>• Assisted to apply techniques of controlling</li> </ul>	<p><b><u>Controlling rehabilitation centre/department:</u></b></p> <ul style="list-style-type: none"> <li>• Define controlling</li> <li>• Objectives</li> <li>• Finding out actual activities performed</li> <li>• Comparing the actual activities performed with the objectives</li> <li>• Corrective measures</li> <li>• Execution of the corrective measures</li> <li>• Meaning of controlling the overall activities towards the streamline of objectives fulfillment</li> <li>• Keep records</li> </ul>

**Task 8: Assist to manage community based rehabilitation**

<b>Performance steps</b>	<b>Terminal performance objectives</b>	<b>Related technical knowledge</b>
<ol style="list-style-type: none"> <li>1. Familiarize with community based rehabilitation</li> <li>2. Identify the impairment, disability and handicapped people in the community.</li> <li>3. Provide awareness programme related to rehabilitation.</li> <li>4. Prepare plan for rehabilitation of needy people.</li> <li>5. Assist to perform the rehabilitation</li> <li>6. Refer as required</li> <li>7. Keep records</li> </ol>	<p><b><u>Condition (Given):</u></b> Given community</p> <p><b><u>Task (What):</u></b> Assist to manage community based rehabilitation</p> <p><b><u>Standard (How well):</u></b></p> <ul style="list-style-type: none"> <li>• Perform community based rehabilitation as required</li> </ul>	<p><b><u>Rehabilitation:</u></b></p> <ul style="list-style-type: none"> <li>• Definition and purpose of community based rehabilitation</li> </ul>

Tools / Equipment / Materials: Books, hands out, paper, pen.

## **Module: 2: Handling of tools, materials & equipment**

### **Description:**

It consists of the skills and knowledge related to the handling of tools, materials, and equipment related to physiotherapy and rehabilitation center. Each task structure consists of steps, terminal performance objective [TPO], and related technical knowledge concerned with the task.

### **Objectives:**

After its completion the trainees will be able:

- To handle Shoulder wheel
- To handle Overhead pulley
- To handle parallel bar
- To handle stair case
- To handle quadriceps table
- To handle Therapeutic balls
- To handle Theraband
- To handle Reeducation board
- To handle Arm exerciser
- To handle Ankle exerciser
- To handle Heel exerciser
- To handle Static Cervical Traction Kit
- To handle springs
- To handle static cycle
- To handle Standing frames
- To handle prone board
- To handle tilting bed
- To handle supinator and pronator
- To handle superficial heating modalities
- To handle Goniometer
- To handle weigh cuffs
- To handle CP chair

### **Tasks:**

1. Handle Shoulder wheel
2. Handle Overhead pulley
3. Handle parallel bar
4. Handle stair case
5. Handle quadriceps table
6. Handle Therapeutic balls
7. Handle Theraband
8. Handle reeducation board
9. Handle Arm exerciser
10. Handle ankle exerciser
11. Handle heel exerciser
12. Handle Static Cervical Traction Kit
13. Handle springs
14. Handle static cycle
15. Handle Standing frames
16. Handle prone board

17. Handle tilting bed
18. Handle supinator and pronator
19. Handle superficial heating modalities
20. Handle Goniometer
21. Handle weigh cuffs
22. Handle CP chair

**Task: 1** Handle Shoulder wheel

<b>Performance steps</b>	<b>Terminal performance objectives</b>	<b>Related technical knowledge</b>
<ol style="list-style-type: none"> <li>1. Receive instruction</li> <li>2. Assist to identify the equipment.</li> <li>3. Assist to check parts.</li> <li>4. Assist to stand on either side of the equipment.</li> <li>5. Assist to catch handle</li> <li>6. Assist to adjust length of arm if compact model.</li> <li>7. Assist to rotate the wheel in clock wise direction.</li> <li>8. Assist to rotate the wheel in anti clockwise direction.</li> <li>9. Assist to stand facing the wheel.</li> <li>10. Assist to rotate in clockwise direction</li> <li>11. Assist to rotate in anti clockwise direction</li> </ol>	<p><b><u>Condition (Given):</u></b> Shoulder wheel</p> <p><b><u>Task (What):</u></b> Handle shoulder wheel.</p> <p><b><u>Standards (How well):</u></b></p> <ul style="list-style-type: none"> <li>• Performed all steps in sequence.</li> <li>• Handled shoulder wheel successfully.</li> </ul>	<p><b><u>Handling shoulder wheel:</u></b></p> <ul style="list-style-type: none"> <li>• Concept of handling shoulder wheel.</li> <li>• Interpretation of manuals and catalogue.</li> <li>• Indication contraindication and use of shoulder wheel.</li> <li>• Safety precautions.</li> </ul>

Tools/Equipment/Materials: Shoulder wheel.

Safety: Check nuts and bolts properly.

**Task: 2** Handle Overhead pulley

<b>Performance steps</b>	<b>Terminal performance objectives</b>	<b>Related technical knowledge</b>
<ol style="list-style-type: none"> <li>1. Adjust the length of the rope</li> <li>2. Place a chair in centre of two hand pieces</li> <li>3. Sit on the chair.</li> <li>4. Catch both hand pieces.</li> <li>5. Move your one hand down with other hand up.</li> <li>6. Move your hands up and down alternately with elbow bending and straitening.</li> <li>7. Conform movements</li> <li>8. Keep records.</li> </ol>	<p><b><u>Condition (Given):</u></b> Pulley, Chair.</p> <p><b><u>Task (What):</u></b> Handle shoulder wheel.</p> <p><b><u>Standards (How well):</u></b></p> <ul style="list-style-type: none"> <li>• Performed all the steps in sequence</li> </ul>	<p><b><u>Handling Overhead pulley :</u></b></p> <ul style="list-style-type: none"> <li>• Concept of handling overhead pulley</li> <li>• Interpretation of manual and catalog</li> <li>• Indications, contraindications and use of overhead pulley</li> <li>• Safety precautions</li> </ul>

Tools/Equipments/Materials: Chair, Overhead pulley.

Safety: Check equipment before handling.

Check rope and hand piece.

**Task: 3** Handle parallel bar

<b>Performance steps</b>	<b>Terminal performance objectives</b>	<b>Related technical knowledge</b>
<ol style="list-style-type: none"> <li>1. Receive instruction</li> <li>2. Adjust height</li> <li>3. Make foot prints.</li> <li>4. Stand in between two bar.</li> <li>5. Catch both bars and stand erect</li> <li>6. Step on either side alternately.</li> <li>7. Step forward and backward.</li> <li>8. Step forward as normal walking</li> <li>9. Confirm all steps.</li> </ol>	<p><b><u>Condition (Given):</u></b> Parallel bar.</p> <p><b><u>Task (What):</u></b> Handle parallel bar..</p> <p><b><u>Standards (How well):</u></b></p> <ul style="list-style-type: none"> <li>• All steps performed in sequence.</li> </ul>	<p><b><u>Handle parallel bar:</u></b></p> <ul style="list-style-type: none"> <li>• Concept of handling parallel bar</li> <li>• Interpretation of manual and catalog</li> <li>• Indication, Contraindication and use of parallel bar</li> <li>• Safety precautions.</li> </ul>

Tools/Equipments/Materials: Parallel bar, Chalk.

Safety: Check adjuster nub.

**Task: 4** Handle stair case

<b>Performance steps</b>	<b>Terminal performance objectives</b>	<b>Related technical knowledge</b>
<ol style="list-style-type: none"> <li>1. Receive instruction.</li> <li>2. Stand facing stair case</li> <li>3. Catch arms of stair case</li> <li>4. Move up stair with your right / left leg first alternately</li> <li>5. Move down stair with your left / right leg first alternatively.</li> <li>6. Repeat and conform technique of stair climbing.</li> </ol>	<p><b><u>Condition (Given):</u></b> Stair case</p> <p><b><u>Task (What):</u></b> Handle stair case.</p> <p><b><u>Standards (How well):</u></b></p> <ul style="list-style-type: none"> <li>• Performed all steps in sequence.</li> </ul>	<p><b><u>Handling stair case:</u></b></p> <ul style="list-style-type: none"> <li>• Concept of handling stair case.</li> <li>• Interpretation of manual and catalog</li> <li>• Safety precautions.</li> </ul>

Tools/Equipments/Materials: Stair case.

Safety: Check railing / bar and steps if any fault.

**Task: 5** Handle quadriceps table

<b>Performance steps</b>	<b>Terminal performance objectives</b>	<b>Related technical knowledge</b>
<ol style="list-style-type: none"> <li>1. Receive instruction</li> <li>2. Confirm and put weighs / resistance as needed</li> <li>3. Sit on the quadriceps table</li> <li>4. Grip the arms of table</li> <li>5. Adjust length.</li> <li>6. Strait your leg with resistance and then bend it.</li> <li>7. Confirm the techniques of uses</li> <li>8. Keep records.</li> </ol>	<p><b><u>Condition (Given):</u></b> Quadriceps table, Weighs / resistance.</p> <p><b><u>Task (What):</u></b> Handle quadriceps table.</p> <p><b><u>Standards (How well):</u></b></p> <ul style="list-style-type: none"> <li>• Handled the table as required.</li> </ul>	<p><b><u>Handling of quadriceps table:</u></b></p> <ul style="list-style-type: none"> <li>• Concept of handling quadriceps table</li> <li>• Interpretation of manual and catalog</li> <li>• Indication, contraindication and use of quadriceps table</li> <li>• Application of resistances/weights.</li> <li>• Safety precautions</li> </ul>

Tool/Equipment/materials: Quadriceps table, weighs

**Task: 6** Handle Therapeutic balls.

<b>Performance steps</b>	<b>Terminal performance objectives</b>	<b>Related technical knowledge</b>
<ol style="list-style-type: none"> <li>1. Receive instruction</li> <li>2. Inflate the ball</li> <li>3. Sit on the ball</li> <li>4. Do balance exercises</li> <li>5. Do strengthening exercises</li> <li>6. Lie on back on the ball</li> <li>7. Do strengthening exercises</li> <li>8. Lie on your abdomen</li> <li>9. Do strengthening exercises</li> <li>10. Lie on your side</li> <li>11. Do strengthening exercises</li> <li>12. Observe and confirm the exercises performed in different positions.</li> </ol>	<p><b><u>Condition (Given):</u></b> Ball and Pump</p> <p><b><u>Task (What):</u></b> Handle therapeutic balls.</p> <p><b><u>Standard (How well):</u></b></p> <ul style="list-style-type: none"> <li>• Performed all exercises perfectly.</li> <li>• Followed all steps in sequence.</li> </ul>	<p><b><u>Handling of Therapeutic balls:</u></b></p> <ul style="list-style-type: none"> <li>• Interpretation of manual and catalog</li> <li>• Indication and contraindications</li> <li>• Balance exercises on ball</li> <li>• Strengthening exercises on ball.</li> <li>• Safety Precautions.</li> </ul>

Tools/Equipments/Materials: Exercise ball, Pump

Safety: Check leakage of air.



**Task: 7 Handle Theraband**

<b>Performance steps</b>	<b>Terminal performance objectives</b>	<b>Related technical knowledge</b>
<ol style="list-style-type: none"> <li>1. Receive instruction</li> <li>2. Apply powder</li> <li>3. Catch on to the ends of band</li> <li>4. Stretch band to all the normal anatomical movements of upper extremity.</li> <li>5. Use the band for strengthening the muscles of shoulder girdle, arm, forearm and hand.</li> <li>6. Catch/Tie two ends and move your lower extremity against the resistive force of the band.</li> <li>7. Use the band to strengthen the muscles of hip joint, thigh, leg and foot.</li> <li>8. Conform all the exercises</li> <li>9. Keep records.</li> </ol>	<p><b><u>Condition (Given):</u></b> Theraband</p> <p><b><u>Task (What):</u></b> Handle theraband.</p> <p><b><u>Standards (How well):</u></b></p> <ul style="list-style-type: none"> <li>• Followed all the steps in sequence.</li> <li>• Handled theraband.</li> </ul>	<p><b><u>Handling of Theraband:</u></b></p> <ul style="list-style-type: none"> <li>• Interpretation of manual and catalog</li> <li>• Indication and contraindications</li> <li>• Anatomical movements of joints</li> <li>• Concept of muscle strengthening by using theraband</li> <li>• Safety precautions</li> </ul>

Tools/equipment/material: Powder, Theraband.

Safety: Check whether the powder is applied properly.

**Task: 8** Handle reeducation board

<b>Performance steps</b>	<b>Terminal performance objectives</b>	<b>Related technical knowledge</b>
<ol style="list-style-type: none"> <li>1. Receive instruction</li> <li>2. Identify the board</li> <li>3. Bring it to the site of exercise</li> <li>4. Place it on to the table/bed as required</li> <li>5. Apply powder on the board</li> <li>6. Put the part to be reeducated on the board.</li> <li>7. Move your part to gravity assisted direction.</li> <li>8. Move your part to gravity eliminating direction</li> <li>9. eliminating direction</li> <li>10. Move your part to gravity resisted direction.</li> <li>11. Perform once again and conform the exercises.</li> </ol>	<p><b><u>Condition(Given):</u></b> Reeducation board and weak / Inhibited part of the human body.</p> <p><b><u>Task (What):</u></b> Handle reeducation board.</p> <p><b><u>Standards (How well):</u></b></p> <ul style="list-style-type: none"> <li>• Performed all steps in sequence.</li> <li>• Handled reeducation board.</li> </ul>	<p><b><u>Handling of reeducation board:</u></b></p> <ul style="list-style-type: none"> <li>• Interpretation of manual and catalog</li> <li>• Concept of grading of muscle power</li> <li>• Concept of reeducation of weak muscles using reeducation board</li> <li>• Placing of board for reeducation</li> <li>• Safety precautions</li> </ul>

Tools/equipments/materials: Powder, Reeducation board, table or patient bed.

Safety: Check surface of board if any roughness.

**Task: 9** Handle Arm exerciser

<b>Performance steps</b>	<b>Terminal performance objectives</b>	<b>Related technical knowledge</b>
<ol style="list-style-type: none"> <li>1. Identify the exerciser</li> <li>2. Sit on the seat</li> <li>3. Grip the handles</li> <li>4. Pull one arm to your body</li> <li>5. Push other arm away from your body</li> <li>6. Do same alternatively.</li> <li>7. Conform the movements</li> </ol>	<p><b><u>Condition (Given):</u></b> Arm Exerciser</p> <p><b><u>Task (What):</u></b> Handle Arm Exerciser.</p> <p><b><u>Standards (How well):</u></b></p> <ul style="list-style-type: none"> <li>• Handled the arm exerciser.</li> </ul>	<p><b><u>Handling of Arm exerciser:</u></b></p> <ul style="list-style-type: none"> <li>• Interpretation of manual and catalog</li> <li>• Concept of using arm exerciser</li> <li>• Movements of exerciser</li> <li>• Safety precautions.</li> </ul>

Tools/equipments/materials: Arm exerciser.

Safety: Check any loosening of the parts.

**Task: 10** Handle ankle exerciser

<b>Performance steps</b>	<b>Terminal performance objectives</b>	<b>Related technical knowledge</b>
<ol style="list-style-type: none"> <li>1. Identify the equipment</li> <li>2. Bring it to a chair</li> <li>3. Sit on the chair</li> <li>4. Put your foot on the exerciser</li> <li>5. Tie the foot with bands</li> <li>6. Move your forefoot down.</li> <li>7. Move your heel down.</li> <li>8. Repeat the movement again.</li> <li>9. Conform exercises</li> </ol>	<p><b><u>Condition (Given):</u></b> Ankle exerciser</p> <p><b><u>Task (What):</u></b> Handle ankle exerciser.</p> <p><b><u>Standards (How well):</u></b></p> <ul style="list-style-type: none"> <li>• All steps performed in sequence.</li> <li>• Handled the exerciser.</li> </ul>	<p><b><u>Handling of ankle exerciser:</u></b></p> <ul style="list-style-type: none"> <li>• Interpretation of manual and catalog</li> <li>• Concept of using ankle exerciser</li> <li>• Safety precautions</li> </ul>

Tools/equipments/materials: Ankle exerciser.

Safety: Check spring and bands.

**Task: 11** Handle heel exerciser

<b>Performance steps</b>	<b>Terminal performance objectives</b>	<b>Related technical knowledge</b>
<ol style="list-style-type: none"> <li>1. Identify the equipment</li> <li>2. Arrange a chair</li> <li>3. Bring the equipment to chair</li> <li>4. Put your foot on the exerciser.</li> <li>5. Push it down</li> <li>6. Release your pressure</li> <li>7. Conform the movements</li> </ol>	<p><b><u>Condition (Given):</u></b> Heel exerciser</p> <p><b><u>Task (What):</u></b> Handle heel exerciser</p> <p><b><u>Standards (How well):</u></b></p> <ul style="list-style-type: none"> <li>• Performed all steps in sequence.</li> </ul>	<p><b><u>Handling of heel exerciser:</u></b></p> <ul style="list-style-type: none"> <li>• Interpretation of manual and catalog</li> <li>• Concept of handling heel exerciser</li> </ul>

Tools/Equipment/Materials: Heel exerciser.

**Task: 12 Handle Static Cervical Traction Kit.**

<b>Performance steps</b>	<b>Terminal performance objectives</b>	<b>Related technical knowledge</b>
<ol style="list-style-type: none"> <li>1. Identify and collect equipment</li> <li>2. Identify and arrange the weighs</li> <li>3. Hang hook of cervical traction kit on the wall or door.</li> <li>4. Keep a person on a chair</li> <li>5. Put cervical apparatus in neck.</li> <li>6. Adjust angulations of head-neck as required</li> <li>7. Put weight</li> <li>8. Do traction for required time.</li> <li>9. Keep records.</li> </ol>	<p><b><u>Condition (Given):</u></b> Cervical traction kit with weighs.</p> <p><b><u>Task (What):</u></b> Handle static cervical kit.</p> <p><b><u>Standards (How well):</u></b></p> <ul style="list-style-type: none"> <li>• Performed all steps in sequence.</li> </ul>	<p><b><u>Handling of static cervical traction kit:</u></b></p> <ul style="list-style-type: none"> <li>• Interpretation of manual and catalog</li> <li>• Application of static cervical traction</li> <li>• Indication and contraindication</li> <li>• of cervical traction</li> <li>• Safety precautions</li> </ul>

Tools / Equipment / Materials: Traction kit, Weighs, Chair, Hook on the wall.

Safety: Check hook, Weighs and patient's position on sitting.

**Task: 13 Handle springs**

<b>Performance steps</b>	<b>Terminal performance objectives</b>	<b>Related technical knowledge</b>
<ol style="list-style-type: none"> <li>1. Identify the springs</li> <li>2. Categorize them on the basis of uses.</li> <li>3. Push the spring</li> <li>4. Pull the spring</li> <li>5. Control the spring on pulling</li> <li>6. Control the spring on pushing</li> <li>7. Conform the exercises</li> <li>8. Keep records.</li> </ol>	<p><b><u>Condition (Given):</u></b> Springs</p> <p><b><u>Task (What):</u></b> Handle springs</p> <p><b><u>Standards (How well):</u></b></p> <ul style="list-style-type: none"> <li>• Performed all steps in sequence.</li> </ul>	<p><b><u>Handling of springs:</u></b></p> <ul style="list-style-type: none"> <li>• Interpretation of manual and catalog</li> <li>• Concept of using springs</li> <li>• Exercises with springs</li> <li>• Safety precautions</li> </ul>

Tools/equipments/materials: Springs.

Safety: Check condition of spring you have to use.

**Task: 14** Handle static cycle

<b>Performance steps</b>	<b>Terminal performance objectives</b>	<b>Related technical knowledge</b>
<ol style="list-style-type: none"> <li>1. Identify the cycle.</li> <li>2. Ride on the seat of cycle</li> <li>3. Catch handles</li> <li>4. Place feet on piddles</li> <li>5. Adjust scales (time, speed )</li> <li>6. Press piddles and move it</li> <li>7. Read scale frequently while moving.</li> <li>8. Keep records.</li> </ol>	<p><b><u>Condition (Given):</u></b> Static by-cycle.</p> <p><b><u>Task (What):</u></b> Handle static exercises.</p> <p><b><u>Standards (How well):</u></b></p> <ul style="list-style-type: none"> <li>• Performed the exercises as required.</li> </ul>	<p><b><u>Handling of static cycle:</u></b></p> <ul style="list-style-type: none"> <li>• Concept of handling</li> <li>• Interpretation of manual and catalog</li> <li>• Indication and contraindication</li> <li>• Safety precautions</li> </ul>

Tool/equipments/ material: Static by-cycle

Safety: check handle, piddle and meters.

**Task: 15** Handle Standing frames.

<b>Performance steps</b>	<b>Terminal performance objectives</b>	<b>Related technical knowledge</b>
<ol style="list-style-type: none"> <li>1. Identify the frame</li> <li>2. Loosen all the supports and belts</li> <li>3. Insert feet into the support frame.</li> <li>4. Tie belts at knee, hip and chest level</li> <li>5. Tie supports at lower end of leg/ankle level.</li> <li>6. Confirm patient's comfort.</li> <li>7. Keep records.</li> </ol>	<p><b><u>Condition (Given):</u></b> Standing frame</p> <p><b><u>Task(What):</u></b> Handle standing frame.</p> <p><b><u>Standards (How well):</u></b></p> <ul style="list-style-type: none"> <li>• Performed all the steps perfectly.</li> </ul>	<p><b><u>Handling of standing frames:</u></b></p> <ul style="list-style-type: none"> <li>• Concept of handling</li> <li>• Interpretation of manual and catalog</li> </ul>

Tools, equipment/materials: Standing frame.

Safety:

**Task: 16** Handle prone board

Performance steps	Terminal performance objectives	Related technical knowledge
<ol style="list-style-type: none"> <li>1. Identify the board</li> <li>2. Adjust height</li> <li>3. Lie on abdomen keeping head out of the end of board.</li> <li>4. Tie legs and hip with belts</li> <li>5. Attract the client by some attractive materials such as sound, food etc to encourage his / her head and trunk rising.</li> <li>6. Perform brushing on the back of neck while being on board.</li> <li>7. Keep records.</li> </ol>	<p><b><u>Condition (Given)</u></b> Standing frame</p> <p><b><u>Task (What):</u></b> Handle prone board.</p> <p><b><u>Standards (How well):</u></b></p> <ul style="list-style-type: none"> <li>• Performed all the steps in sequence.</li> </ul>	<p><b><u>Handling of prone board:</u></b></p> <ul style="list-style-type: none"> <li>• Concept of handling</li> <li>• Interpretation of manual and catalog</li> <li>• Sensory stimulation by brushing</li> <li>• Audiovisual attraction</li> <li>• Safety precautions</li> </ul>

Tools/equipments /materials: Prone board, Music, Dolls, food.  
Safety; Check height adjuster and belts

**Task: 17** Handle tilting bed.

Performance steps	Terminal performance objectives	Related technical knowledge
<ol style="list-style-type: none"> <li>1. Receive instruction</li> <li>2. Bring the table on horizontal position.</li> <li>3. Lie down on back on the table.</li> <li>4. Adjust foot rest.</li> <li>5. Tight belts at the level of knee, hip and chest.</li> <li>6. Raise bed end of head side up to the required level.</li> <li>7. Maintain this position for at least 30 to 60 minutes.</li> <li>8. Bring table to horizontal position</li> <li>9. Remove all the belts.</li> <li>10. Remove client from bed.</li> <li>11. Keep records.</li> </ol>	<p><b><u>Condition (Given):</u></b> Tilting bed</p> <p><b><u>Task (What):</u></b> Handle tilting bed.</p> <p><b><u>Standards (How well):</u></b></p> <ul style="list-style-type: none"> <li>• Performed all steps in sequence.</li> </ul>	<p><b><u>Handling of tilting bed:</u></b></p> <ul style="list-style-type: none"> <li>• Concept of handling tilting bed</li> <li>• Interpretation of manual and catalog</li> <li>• Safety precaution</li> </ul>

Tools/equipment/materials: Tilting bed.  
Safety: Check foot rest and belts.  
Check blood pressure of patient frequently.

**Task: 18** Handle supinator and pronator

<b>Performance steps</b>	<b>Terminal performance objectives</b>	<b>Related technical knowledge</b>
<ol style="list-style-type: none"> <li>1. Receive instruction</li> <li>2. Sit in front of the equipment</li> <li>3. Catch hand piece</li> <li>4. Rotate hand piece in clockwise direction rotating forearm only.</li> <li>5. Rotate it again in anticlockwise direction rotating forearm only.</li> <li>6. Observe / confirm the technique of handling.</li> <li>7. Keep records.</li> </ol>	<p><b><u>Condition (Given):</u></b> Pronator and supinator</p> <p><b><u>Task (What):</u></b> Handle supinator and pronator.</p> <p><b><u>Standards (How well):</u></b></p> <ul style="list-style-type: none"> <li>• Performed the steps in sequence.</li> </ul>	<p><b><u>Handling of supinator and pronator:</u></b></p> <ul style="list-style-type: none"> <li>• Concept of handling</li> <li>• Interpretation of manual and Catalog</li> </ul>

Tools/equipment/material: Pronation and supination exerciser.

**Task: 19** Handle superficial heating modalities

<b>Performance steps</b>	<b>Terminal performance objectives</b>	<b>Related technical knowledge</b>
<ol style="list-style-type: none"> <li>1. Identify the modalities: <ul style="list-style-type: none"> <li>• Hot water fermentation</li> <li>• Hydroculator</li> <li>• Electric heating pad.</li> </ul> </li> <li>2. Keep it warm as needed.</li> <li>3. Expose the part to be heated.</li> <li>4. Position the patient / part of patient to be heated.</li> <li>5. Confirm time of application.</li> <li>6. Apply the heat over the required part.</li> <li>7. Stop heating if required time is over.</li> <li>8. Ask patient for any affects of heat.</li> </ol>	<p><b><u>Condition (Given):</u></b> Paraffin wax bath, hydroculator, and electric heating pad.</p> <p><b><u>Task (What):</u></b> Handle superficial heating modalities.</p> <p><b><u>Standards (How well):</u></b></p> <ul style="list-style-type: none"> <li>• Followed all steps in sequence.</li> <li>• Applied heating modalities.</li> </ul>	<p><b><u>Handling of superficial heating modalities:</u></b></p> <ul style="list-style-type: none"> <li>• Interpretation of manual and catalog</li> <li>• Types of application</li> <li>• Indication, contraindication</li> <li>• Time and intensity</li> <li>• Safety precautions</li> </ul>

Tools/equipment/materials: Electric heating pad, Hydroculator, Gel packs, Paraffin wax bath, Towels, Macintosh and Live line.

Safety: Check live line, Test heat before apply.

**Task: 20 Handle Goniometer**

<b>Performance steps</b>	<b>Terminal performance objectives</b>	<b>Related technical knowledge</b>
<ol style="list-style-type: none"> <li>1. Identify the goniometer</li> <li>2. Identify the joint to be measured</li> <li>3. Position the patient in such a way that the part to be measured should be in comfortable position.</li> <li>4. Place fulcrum at the centre of joint.</li> <li>5. Place movable arm to the movable part and fixed arm to the immovable part of the joint.</li> <li>6. Move movable part along with the movable arm of goniometer up to the available range of motion.</li> <li>7. Read the scale.</li> <li>8. Confirm the range of motion</li> <li>9. Keep records.</li> </ol>	<p><b><u>Condition (Given):</u></b> Goniometer, Joint</p> <p><b><u>Task (What):</u></b> Handle Goniometer.</p> <p><b><u>Standards (How well):</u></b></p> <ul style="list-style-type: none"> <li>• Followed all the steps in sequence.</li> <li>• Performed 70% of the task.</li> </ul>	<p><b><u>Handling of Goniometer:</u></b></p> <ul style="list-style-type: none"> <li>• Interpretation of manual and catalog</li> <li>• Patient's position</li> <li>• Parts of goniometer</li> <li>• Placement of Goniometer</li> <li>• Movements and Range of motion of joints of both upper and lower extremities.</li> </ul>

Tools/equipment/material: Goniometer.

**Task: 21 Handle weigh cuffs**

<b>Performance steps</b>	<b>Terminal performance objectives</b>	<b>Related technical knowledge</b>
<ol style="list-style-type: none"> <li>1. Identify weigh cuffs</li> <li>2. Identify the amount of weight to be applied</li> <li>3. Position the patient.</li> <li>4. Apply the weight on the part to be resisted.</li> <li>5. Move the part slowly against the resistance.</li> <li>6. Repeat the movements.</li> <li>7. Confirm the exercises.</li> </ol>	<p><b><u>Condition (Given):</u></b> Weigh cuffs</p> <p><b><u>Task (What):</u></b> Handle weigh cuffs.</p> <p><b><u>Standards (How well):</u></b> Handled weigh cuffs.</p>	<p><b><u>Handling of weigh cuffs:</u></b></p> <ul style="list-style-type: none"> <li>• Interpretation of manual and catalog</li> <li>• Calculation of weight</li> <li>• Application of weight</li> <li>• Joint movement with weigh cuffs</li> </ul>

Tools/equipment/materials: Weigh cuffs.



**Task: 22 Handle CP Chair**

<b>Performance steps</b>	<b>Terminal performance objectives</b>	<b>Related technical knowledge</b>
1. Receive instruction 2. Sit in front of the equipment 3. Place Chair adjacent to the table 4. Check chair if any defects 5. Keep chair and table at a level so that the child feels comfortable 6. Observe / confirm the adjustment of chair and table. 7. Keep records.	<p><b><u>Condition (Given):</u></b> CP Chair and table</p> <p><b><u>Task (What):</u></b> Handle CP chair</p> <p><b><u>Standards (How well):</u></b></p> <ul style="list-style-type: none"> <li>• Performed the steps in sequence.</li> </ul>	<p><b><u>Handling of CP Chair and Table</u></b></p> <ul style="list-style-type: none"> <li>• Concept of handling</li> <li>• Interpretation of manual and Catalog</li> </ul>

Tools/equipment/material: CP chair and table.

## Module: 3: Human Anatomy and Physiology

### Description:

It consists of the skills and knowledge related to the structure and function of human body. Each task structure consists of steps, terminal performance objective [TPO], and related technical knowledge concerned with the task.

### Objectives:

After its completion the trainees will be able to:

- familiarize with muscular system
- familiarize with nervous system
- familiarize with skeletal system
- familiarize with respiratory system
- familiarize with circulatory system
- familiarize / observe mechanics of joint
- familiarize / observe human posture
- familiarize / observe / identify origin, insertion, nerve supply and action of muscle
- familiarize with physiology of nerve supply
- familiarize/observe/Identify the line of gravity, centre of gravity, levers and Pulleys

### Tasks:

1. familiarize with muscular system
2. familiarize with nervous system
3. familiarize with skeletal system
4. familiarize with respiratory system
5. familiarize with circulatory system
6. familiarize / observe mechanics of joint
7. familiarize / observe human posture
8. familiarize / observe / identify origin, insertion, nerve supply and action of muscle
9. familiarize with physiology of nerve supply
10. familiarize/observe/Identify the line of gravity, centre of gravity, levers and Pulleys

**Task: 1** familiarize with muscular system

Performance steps	Terminal performance objectives	Related technical knowledge
<ol style="list-style-type: none"> <li>1. Familiarize with the Muscle, Tendon and Ligament</li> <li>2. Familiarize with the structure of muscle</li> <li>3. Familiarize with the name of major muscles responsible to move joints of limbs.</li> <li>4. Observe the muscles responsible for joint</li> </ol>	<p><b><u>Condition (Given):</u></b> A client.</p> <p><b><u>Task (What):</u></b> Familiarize with structure and function of Muscles.</p> <p><b><u>Standards (How well):</u></b></p>	<p><b><u>Mechanics of joints:</u></b></p> <ul style="list-style-type: none"> <li>• Name of major muscles</li> <li>• Structure and types of muscles</li> <li>• Functions of muscles</li> <li>• Location, action and nerve supply of ; muscles of upper limb:</li> <li>• Trapezius, Sternocle-</li> </ul>

<p>movement.</p> <ol style="list-style-type: none"> <li>5. Observe the muscles responsible for facial expressions.</li> <li>6. Observe angle of muscle pull.</li> <li>7. Observe work of different muscles.</li> <li>8. Familiarize with theory of muscle contraction.</li> <li>9. Familiarize with muscle power.</li> <li>10. Familiarize with endurance</li> <li>11. Familiarize with fatigability of muscle.</li> <li>12. Familiarize with agonistic function of muscle.</li> <li>13. Familiarize with antagonistic function of muscle.</li> <li>14. Keep records</li> </ol>	<ul style="list-style-type: none"> <li>• Functions of muscles well identified and listed.</li> </ul>	<p>idomastoid, Deltoid, Triceps, Biceps, Long Flexor and Extensors of wrist and fingers</p> <p>muscles of lower limbs:</p> <ul style="list-style-type: none"> <li>• Iliacus, Psoas major, Piriformis, , Hip abductors, Quadriceps, Hamstring, Dorsiflexor and plantar flexor of ankle joint.</li> <li>• Muscle work, power, endurance</li> <li>• Muscle bulk, Contractures, muscles shortening</li> <li>• Theory of muscle contraction</li> <li>• Characteristics of skeletal muscles</li> <li>• Agonist and antagonistic function</li> <li>•</li> </ul>
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Tools/equipment/material: Human skeleton, Musculoskeletal charts.

**Task 2:** familiarize with nervous system

<b>Performance steps</b>	<b>Terminal performance objectives</b>	<b>Related technical knowledge</b>
<ol style="list-style-type: none"> <li>1. Familiarize with the structure of brain and spinal cord.</li> <li>2. Familiarize with the function of brain and spinal cord.</li> <li>3. Familiarize with pyramidal and extra pyramidal tract</li> <li>4. Familiarize with peripheral nervous system</li> <li>5. Observe motor and sensory function of brain</li> <li>6. Observe autonomic and</li> </ol>	<p><b><u>Condition (Given):</u></b> Human brain.</p> <p><b><u>Task (What):</u></b> Familiarize / observe structure and functions of brain and spinal cord.</p> <p><b><u>Standards (How well):</u></b></p> <ul style="list-style-type: none"> <li>• Followed all steps in sequence.</li> </ul>	<p><b><u>Human Brain:</u></b></p> <ul style="list-style-type: none"> <li>• Structure of brain</li> <li>• Parts of brain</li> <li>• Blood supply to the brain</li> <li>• Functions of different parts of brain (Cerebrum, Cerebellum, Mid brain, Pons verolli, Medulla oblongata)</li> <li>• Tracts of Brain (Pyramidal and Extraparidal).</li> <li>• Root, course and</li> </ul>

voluntary function of brain 7. Keep records		muscles supplied by Axillary, Radial, Ulnar, Median, Femoral, Obturator and Sciatic Nerve.
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Tools/equipment/material: books, charts, handouts

**Task 3: Familiarize with skeletal system**

Performance steps	Terminal performance objectives	Related technical knowledge
<ol style="list-style-type: none"> <li>1. Familiarize with the number and name of bones in human body.</li> <li>2. Familiarize with the structure of bone.</li> <li>3. Familiarize with bone growth and fracture healing.</li> <li>4. Observe bones of different size and shapes</li> <li>5. Familiarize with function of bone</li> <li>6. Keep records</li> </ol>	<p><b><u>Condition (Given):</u></b> Human skeleton.</p> <p><b><u>Task (What):</u></b> Familiarize / observe structure and functions of bone.</p> <p><b><u>Standards (How well):</u></b></p> <ul style="list-style-type: none"> <li>• Followed all steps in sequence.</li> </ul>	<p><b><u>Human Skeleton:</u></b></p> <ul style="list-style-type: none"> <li>• Structure and types of bones</li> <li>• Functions of bone</li> <li>• Bone growth.</li> <li>• Fracture healing</li> <li>• Surface marking of bone</li> </ul>

Tools/equipment/material: Human skeleton, Musculoskeletal charts.

**Task 4: Familiarize with respiratory system**

Performance steps	Terminal performance objectives	Related technical knowledge
<ol style="list-style-type: none"> <li>1. Familiarize with the parts of respiratory tract</li> <li>2. Familiarize with the structure of lungs (lobes, segments and bronchial tree)</li> <li>3. Familiarize with the muscles of respiration.</li> <li>4. Familiarize with external and internal respiration.</li> <li>5. Observe normal breathing</li> <li>6. Observe normal chest</li> </ol>	<p><b><u>Condition (Given):</u></b> Respiration.</p> <p><b><u>Task (What):</u></b> Familiarize / observe structure and functions of muscle.</p> <p><b><u>Standards (How well):</u></b></p> <ul style="list-style-type: none"> <li>• Followed all steps in sequence.</li> </ul>	<p><b><u>Respiration:</u></b></p> <ul style="list-style-type: none"> <li>• Structure and function of respiratory tract,</li> <li>• Mechanics of respiration</li> <li>• Internal respiration</li> <li>• Normal and abnormal breathing pattern</li> </ul>

expansion, costal and diaphragmatic breathing. 7. Keep records		
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Tools/equipment/material: Human respiratory system: charts, books, handouts.

**Task 5: Familiarize with circulatory system**

<b>Performance steps</b>	<b>Terminal performance objectives</b>	<b>Related technical knowledge</b>
<ol style="list-style-type: none"> <li>1. Familiarize with the parts of circulatory system</li> <li>2. Familiarize with the structure of heart</li> <li>3. Familiarize with the vessels responsible for circulation.</li> <li>4. Familiarize with function of heart.</li> <li>5. Familiarize with normal heart sounds, pulse, blood pressure.</li> <li>6. Observe heart sound, arterial pulse</li> <li>7. Observe blood pressure</li> <li>8. Keep records</li> </ol>	<p><b><u>Condition (Given):</u></b> Blood circulation.</p> <p><b><u>Task (What):</u></b> Familiarize / observe structure and functions of heart and blood vessels</p> <p><b><u>Standards (How well):</u></b></p> <ul style="list-style-type: none"> <li>• Followed all steps in sequence.</li> </ul>	<p><b><u>Blood circulation.</u></b></p> <ul style="list-style-type: none"> <li>• Structure and function of heart,</li> <li>• Types and function of blood vessels</li> <li>• Normal and abnormal heart sounds, pulse and pressure</li> </ul>

Tools/equipment/material: Human circulatory system: charts, books, handouts.

**Task 6: Familiarize / observe mechanics of joint.**

<b>Performance steps</b>	<b>Terminal performance objectives</b>	<b>Related technical knowledge</b>
<ol style="list-style-type: none"> <li>1. Familiarize with the types of joint</li> <li>2. Familiarize with the structure of joint</li> <li>3. Familiarize with the direction and range of motion of joint.</li> <li>4. Observe the motion in all three ranges.</li> <li>5. Observe angle of muscle pull.</li> <li>6. Keep records</li> </ol>	<p><b><u>Condition (Given):</u></b> Human skeleton.</p> <p><b><u>Task (What):</u></b> Familiarize / observe mechanics of joint.</p> <p><b><u>Standards (How well):</u></b></p> <ul style="list-style-type: none"> <li>• Followed all steps in sequence.</li> </ul>	<p><b><u>Mechanics of joints:</u></b></p> <ul style="list-style-type: none"> <li>• Concept of mechanics of joints.</li> <li>• Types and structure of joints.</li> <li>• Direction of motion of joints.</li> <li>• Three ranges of motion.</li> <li>• Differentiation between normal and abnormal movements of joints</li> </ul>

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Tools/equipment/material: Human skeleton, Musculoskeletal charts.

**Task 7: Familiarize/Observe human posture in different position**

<b>Performance steps</b>	<b>Terminal performance objectives</b>	<b>Related technical knowledge</b>
<ol style="list-style-type: none"> <li>1. Familiarize with anatomical position of human body</li> <li>2. Observe level of shoulders</li> <li>3. Observe chest deformities.</li> <li>4. Observe spinal curves</li> <li>5. Observe pelvic tilting</li> <li>6. Observe leg length discrepancy</li> <li>7. Observe curves of sole</li> <li>8. Observe deformities.</li> <li>9. Keep records.</li> </ol>	<p><b><u>Condition (Given):</u></b> A client.</p> <p><b><u>Task (What):</u></b> Familiarize / observe human posture in different position</p> <p><b><u>Standards (How well):</u></b></p> <ul style="list-style-type: none"> <li>• Followed all steps in sequence.</li> <li>• Identified the postural condition.</li> </ul>	<p><b><u>Human posture:</u></b></p> <ul style="list-style-type: none"> <li>• Anatomical positions</li> <li>• Spinal and plantar curves</li> <li>• Chest deformities</li> <li>• Spinal deformities</li> <li>• Normal and abnormal human posture</li> </ul>

Tools/equipment/material: Human skeleton.

**Task 8: Familiarize/observe/Identify the line of gravity, center of gravity, levers and pulleys.**

<b>Performance steps</b>	<b>Terminal performance objectives</b>	<b>Related technical knowledge</b>
<ol style="list-style-type: none"> <li>1. Familiarize with the definition of gravity</li> <li>2. Identify and observe the effects of gravity on human body.</li> <li>3. Familiarize with the definition of line of gravity.</li> <li>4. Identify and observe the effect of line of gravity on human body.</li> <li>5. Familiarize with the definition centre of gravity.</li> <li>6. Identify and observe the effect of centre of gravity on human body.</li> <li>7. Familiarize with the definition of levers</li> <li>8. Observe the movement</li> </ol>	<p><b><u>Condition (Given):</u></b> Client and tools.</p> <p><b><u>Task (What):</u></b> Familiarize/observe/Identify the line of gravity, Centre of gravity, levers and pulleys.</p> <p><b><u>Standards (How well):</u></b></p> <ul style="list-style-type: none"> <li>• Performed all steps in sequence.</li> </ul>	<p><b><u>Line of gravity, center of gravity, levers and Pulleys:</u></b></p> <ul style="list-style-type: none"> <li>• Definition, uses and effects of gravity, liver and pulley in therapeutic exercises.</li> </ul>

<p>of joints and levers.</p> <ol style="list-style-type: none"> <li>9. Observe the force of muscles needed to move different joints.</li> <li>10. Familiarize with the definition of pulleys</li> <li>11. Observe the relation between pulley and joint movements.</li> <li>12. Observe the differences in force needed to move parts with or without pulley system.</li> <li>13. Keep records.</li> </ol>		
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Tools/equipment/materials: Human skeleton, levers, pulleys.



## **Module: 4: Assessment of patients**

### **Description:**

It consists of the skills and knowledge related to the assessment of patients. Each task structure consists of steps, terminal performance objective [TPO], and related technical knowledge concerned with the task.

### **Objectives:**

After its completion the trainees will be able to assist to:

- receive patient
- take case history
- assess range of motion
- assess muscle power
- assess gait
- assess mobility
- assess muscle girth
- assess muscle tone
- examine tendon reflexes
- examine for cordial signs of inflammation
- asses contractures
- assess skin sensation

### **Tasks:**

1. Assist to receive patient
2. Assist to take case history
3. Assist to assess range of motion
4. Assist to assess muscle power
5. Assist to assess gait
6. Assist to assess mobility
7. Assist to assess muscle girth
8. Assist to assess muscle tone
9. Assist to examine tendon reflexes
10. Assist to examine for cordial signs of inflammation
11. Assist to asses contractures
12. Assist to assess skin sensation

**Task: 1** Receive patient.

<b>Performance steps</b>	<b>Terminal performance objectives</b>	<b>Related technical knowledge</b>
<ol style="list-style-type: none"> <li>1. Welcome patient</li> <li>2. Help the patient to enter examination room.</li> <li>3. Provide walking aids if physically challenged.</li> <li>4. Ask to sit on chair or lie on bed</li> <li>5. Introduce yourself with patient.</li> <li>6. Ask his/her visitor to be with patient if she/he needs.</li> <li>7. Make friendly relation with patient.</li> <li>8. Ensure the comfort ability of the patient</li> <li>9. Collect the tools/equipments/ materials needed for examination.</li> <li>10. Observe patient's reaction.</li> <li>11. Keep records.</li> </ol>	<p><b><u>Condition (Given):</u></b> Patient</p> <p><b><u>Task (What):</u></b> Receive patient</p> <p><b><u>Standards (How well):</u></b></p> <ul style="list-style-type: none"> <li>• Performed all steps in sequence.</li> </ul>	<p><b><u>Receiving patient:</u></b></p> <ul style="list-style-type: none"> <li>• Behavior/relation with patient</li> <li>• Support to patient</li> <li>• Position for examination</li> <li>• Equipments for examination</li> <li>• Safety precautions</li> </ul>

Tools / equipments / materials: Patient examination bed, chair, walking aids.

Safety: Check surface, chair, bed and working condition of aids.

**Task: 2** Take case history.

<b>Performance steps</b>	<b>Terminal performance objectives</b>	<b>Related technical knowledge</b>
<ol style="list-style-type: none"> <li>1. Receive patient.</li> <li>2. Take personal history: <ul style="list-style-type: none"> <li>• Name</li> <li>• Age</li> <li>• Sex</li> <li>• Address</li> <li>• Occupation.</li> </ul> </li> <li>3. Ask his chief complains: <ul style="list-style-type: none"> <li>• Pain</li> <li>• Swelling</li> <li>• Weakness,</li> <li>• Deformities,</li> <li>• Disabilities, postural abnormalities or any other.</li> </ul> </li> <li>4. Ask causes if any.</li> </ol>	<p><b><u>Condition (Given):</u></b> Client</p> <p><b><u>Task (What):</u></b> Take case history of a patient.</p> <p><b><u>Standards (How well):</u></b></p> <ul style="list-style-type: none"> <li>• Performed all the steps in sequence.</li> </ul>	<p><b><u>History taking of patient:</u></b></p> <ul style="list-style-type: none"> <li>• Personal history</li> <li>• Family/social history</li> <li>• Past history</li> <li>• Present history</li> <li>• History of incidence</li> <li>• Chief complains</li> <li>• Aggravating and relieving factors</li> <li>• History of medication</li> <li>• History of physical therapy</li> <li>• Effect of previous treatment(s)</li> </ul>

5. Ask duration.		
6. Ask about aggravating factors.		
7. Ask about relieving factors.		
8. Ask about previous treatment.		
9. Ask effects of the previous treatments.		
10. Keep records.		

Tools/ equipments/ materials: Pen, papers.

**Task: 3** Assess range of motion.

<b>Performance steps</b>	<b>Terminal performance objectives</b>	<b>Related technical knowledge</b>
<ol style="list-style-type: none"> <li>1. Receive instruction</li> <li>2. Position the patient.</li> <li>3. Identify landmarks for the measurement of joint range</li> <li>4. Fix the immovable part of joint.</li> <li>5. Position the goniometer.</li> <li>6. Ask the client to move his/her movable part to the normal direction of movements up to the available range of motion.</li> <li>7. Read the scale of goniometer at the end of motion.</li> <li>8. Keep record.</li> <li>9. Position the goniometer.</li> <li>10. Move the movable part passively up to the available range of motion.</li> <li>11. Read the scale of goniometer.</li> <li>12. Keep records.</li> <li>13. Compare passive and active range of motion.</li> </ol>	<p><b><u>Condition (Given):</u></b> Client and tools</p> <p><b><u>Task (What):</u></b> Assess range of motion.</p> <p><b><u>Standards (How well):</u></b></p> <ul style="list-style-type: none"> <li>• Followed all steps in sequence.</li> <li>• Assessed the range of motion</li> </ul>	<p><b><u>Range of motion:</u></b></p> <ul style="list-style-type: none"> <li>• Normal range of motion</li> <li>• Active and passive range</li> <li>• Measurement of range of motion</li> <li>• Safety precautions</li> </ul>

Tools / equipments / materials: Goniometer.

Safety: Do not try to move the joint beyond the available range and/or normal anatomical range.

**Task: 4** Assess muscle power

<b>Performance steps</b>	<b>Terminal performance objectives</b>	<b>Related technical knowledge</b>
<ol style="list-style-type: none"> <li>1. Receive instructions.</li> <li>2. Position the patient.</li> <li>3. Position the part to be assessed.</li> <li>4. Ask patient to move the joint to the required direction of motion.</li> <li>5. Palpate the muscle you want to assess.</li> <li>6. Observe whether the muscle contraction is present.</li> <li>7. Ask the patient to move the joint to required direction of motion in a position parallel to the ground.</li> <li>8. Observe whether the part is moved in full range of motion.</li> <li>9. Ask the patient to move the joint in a direction of motion against the gravity.</li> <li>10. Observe whether the movement is in full range of motion.</li> <li>11. Ask the patient to move the joint to required direction of motion.</li> <li>12. Apply minimal resistance to the moving part against the direction of motion.</li> <li>13. Observe whether the movement is in full range of motion.</li> <li>14. Ask the patient to move the joint to the required direction.</li> <li>15. Apply maximum resistance to the moving part against the direction of movement.</li> <li>16. Observe whether the motion is in full range.</li> <li>17. Keep records.</li> </ol>	<p><b><u>Condition (Given):</u></b> Client.</p> <p><b><u>Task (What):</u></b> Asses muscle power.</p> <p><b><u>Standards (How well):</u></b></p> <ul style="list-style-type: none"> <li>• Performed all steps in sequence.</li> <li>• Assessed muscle power.</li> </ul>	<p><b><u>Muscle power:</u></b></p> <ul style="list-style-type: none"> <li>• Grading of muscle power (0 to 5)</li> <li>• Techniques of manual muscle power testing</li> <li>• Importance of manual muscle power testing</li> </ul>

**Task: 5** Assess Gait.

Performance steps	Terminal performance objectives	Related technical knowledge
<ol style="list-style-type: none"> <li>1. Receive instructions</li> <li>2. Receive patient.</li> <li>3. Observe if the patient is with walking aids.</li> <li>4. Observe the stepping with aids.</li> <li>5. Ask the patient to stand erect.</li> <li>6. Observe balance.</li> <li>7. Observe spinal deformities.</li> <li>8. Observe leg length in standing.</li> <li>9. Observe pelvic tilting.</li> <li>10. Observe deformities of lower limbs.</li> <li>11. Observe stepping.</li> <li>12. Observe hip, knee and ankle movement while stepping.</li> <li>13. Identify the type of gait.</li> <li>14. Keep records.</li> </ol>	<p><b><u>Condition (Given):</u></b> Client.</p> <p><b><u>Task (What):</u></b> Asses gait.</p> <p><b><u>Standards ( How well):</u></b></p> <ul style="list-style-type: none"> <li>• Performed all steps in sequence.</li> <li>• Identified normal and abnormal gait.</li> </ul>	<p><b><u>Gait:</u></b></p> <ul style="list-style-type: none"> <li>• Normal gait</li> <li>• Pathological gait</li> <li>• Factors affecting gait</li> <li>• Identification of abnormal gait.</li> <li>• Types of abnormal gaits</li> </ul>

Tools / Equipments / Materials: Measuring tape, walking aids, parallel bar, and examination bed.

**Task: 6** Asses mobility.

Performance steps	Terminal performance objectives	Related technical knowledge
<ol style="list-style-type: none"> <li>1. Receive instructions.</li> <li>2. Observe movements of limbs.</li> <li>3. Observe turning from supine to side lying and vice versa.</li> <li>4. Observe turning from side lying to prone and vice versa.</li> <li>5. Observe lying to sitting.</li> <li>6. Observe sitting to standing.</li> <li>7. Observe standing to walking.</li> <li>8. Observe turning.</li> <li>9. Asses gait.</li> <li>10. Identify the problem.</li> <li>11. Keep records.</li> </ol>	<p><b><u>Condition (Given):</u></b> Client.</p> <p><b><u>Task (What):</u></b> Asses mobility</p> <p><b><u>Standards (How well):</u></b></p> <ul style="list-style-type: none"> <li>• Followed all steps in sequence.</li> <li>• Mobility assessed</li> </ul>	<p><b><u>Assessing mobility:</u></b></p> <ul style="list-style-type: none"> <li>• Turning, Standing and walking of patient</li> <li>• Identification problems.</li> </ul>

**Task: 7** Asses muscle girth.

<b>Performance steps</b>	<b>Terminal performance objectives</b>	<b>Related technical knowledge</b>
<ol style="list-style-type: none"> <li>1. Receive instructions.</li> <li>2. Position the patient in supine.</li> <li>3. Identify the muscle to be assessed.</li> <li>4. Position the part to be assessed in relaxed position.</li> <li>5. Identify the site to be assessed.</li> <li>6. Measure the girth with measuring tape.</li> <li>7. Identify same site of contra lateral part of the body.</li> <li>8. Measure girth with the same tape.</li> <li>9. Compare two girths.</li> <li>10. Keep records.</li> </ol>	<p><b><u>Condition (Given):</u></b> Client and tools.</p> <p><b><u>Task (What):</u></b> Measure muscle girth</p> <p><b><u>Standards (How well):</u></b></p> <ul style="list-style-type: none"> <li>• Followed all steps in sequence.</li> <li>• Measured the girth perfectly.</li> </ul>	<p><b><u>Assessing muscle girth:</u></b></p> <ul style="list-style-type: none"> <li>• Measurement of muscle girth</li> <li>• Atrophy and hypertrophy of muscles</li> </ul>

Tools/ equipments/ materials: Measuring tape, bed.

**Task: 8** Asses muscle tone.

<b>Performance steps</b>	<b>Terminal performance objectives</b>	<b>Related technical knowledge</b>
<ol style="list-style-type: none"> <li>1. Receive instructions.</li> <li>2. Position the patient in supine.</li> <li>3. Position the part to be assessed in relaxed position.</li> <li>4. Identify the muscle to be assessed</li> <li>5. Palpate the muscle to be assessed.</li> <li>6. Observe whether there is tightness or hardness of the muscle.</li> <li>7. Ask the patient to make tight the muscle to be assessed.</li> <li>8. Palpate the muscle.</li> <li>9. Observe muscle contraction.</li> <li>10. Observe any change in muscle bulk.</li> <li>11. Keep records.</li> </ol>	<p><b><u>Condition (Given):</u></b> Client.</p> <p><b><u>Task (What):</u></b> Asses muscle tone.</p> <p><b><u>Standards (How well):</u></b></p> <ul style="list-style-type: none"> <li>• Assessed muscle tone.</li> </ul>	<p><b><u>Assessing muscle tone:</u></b></p> <ul style="list-style-type: none"> <li>• Definition, cause of hyper and hypo tonicity of muscle.</li> <li>• Observation and palpation</li> <li>• Identification.</li> </ul>

**Task: 9** Examine tendon reflexes

<b>Performance steps</b>	<b>Terminal performance objectives</b>	<b>Related technical knowledge</b>
<ol style="list-style-type: none"> <li>1. Position the patient in relaxed position.</li> <li>2. Grasp the part just above the joint with one hand.</li> <li>3. Take tendon hammer with other hand.</li> <li>4. Ask the patient to take relaxed the part just below the joint.</li> <li>5. Strike the hammer over tendon of required muscle.</li> <li>6. Observe the movement of lower part of joint.</li> <li>7. Confirm jerky movement.</li> <li>8. Keep records.</li> </ol>	<p><b><u>Condition (Given):</u></b> Client.</p> <p><b><u>Task (What):</u></b> Examine tendon reflexes.</p> <p><b><u>Standards (How well):</u></b></p> <ul style="list-style-type: none"> <li>• Performed the examination.</li> </ul>	<p><b><u>Tendon reflexes :</u></b></p> <ul style="list-style-type: none"> <li>• Tendons</li> <li>• Hyper and hypo reflexes.</li> <li>• Concept of handling hammer</li> </ul>

Tools/equipments/materials: Tendon hammer, Patient bed, chair.

**Task: 10** Examine for cordial signs of inflammation.

<b>Performance steps</b>	<b>Terminal performance objectives</b>	<b>Related technical knowledge</b>
<ol style="list-style-type: none"> <li>1. Familiarize with cordial signs</li> <li>2. Identify the part to be examined.</li> <li>3. Palpate the part for warmth.</li> <li>4. Observe swelling</li> <li>5. Observe redness.</li> <li>6. Assess pain.</li> <li>7. Keep records.</li> </ol>	<p><b><u>Condition (Given):</u></b> Client.</p> <p><b><u>Task (What):</u></b> Diagnose inflammation.</p> <p><b><u>Standards (How well):</u></b></p> <ul style="list-style-type: none"> <li>• Performed diagnosis of acute and chronic Inflammation.</li> </ul>	<p><b><u>Cordial signs of inflammation:</u></b></p> <ul style="list-style-type: none"> <li>• Definition of inflammation.</li> <li>• Signs of acute and chronic inflammation</li> <li>• Observation and assessment of signs</li> </ul>

**Task: 11** Asses Contractures (soft tissue)

<b>Performance steps</b>	<b>Terminal performance objectives</b>	<b>Related technical knowledge</b>
<ol style="list-style-type: none"> <li>1. Review the definition and causes of contracture.</li> <li>2. Observe Joints.</li> <li>3. Identify joint that can not be moved in full range of motion.</li> <li>4. Identify muscle restricting the required movement.</li> <li>5. Palpate and identify any hardness.</li> <li>6. Stretch the muscle passively.</li> <li>7. Observe passive range of motion.</li> <li>8. Keep records.</li> </ol>	<p><b><u>Condition (Given):</u></b> Client.</p> <p><b><u>Task (What):</u></b> Assess contracture.</p> <p><b><u>Standards (How well):</u></b></p> <ul style="list-style-type: none"> <li>• Performed diagnosis of contractures.</li> </ul>	<p><b><u>Contractures:</u></b></p> <ul style="list-style-type: none"> <li>• Definition and causes</li> <li>• Identification</li> <li>• Observation</li> <li>• Palpation</li> <li>• Stretching</li> </ul>

**Task: 9** Examine skin sensation

<b>Performance steps</b>	<b>Terminal performance objectives</b>	<b>Related technical knowledge</b>
<ol style="list-style-type: none"> <li>1. Familiarize with the types of skin sensation</li> <li>2. Prepare necessary materials for the test</li> <li>3. Position the patient</li> <li>4. Move soft brush lightly over the skin</li> <li>5. Touch the skin lightly</li> <li>6. Touch the skin with heat and cold</li> <li>7. Pressure the skin with your finger</li> <li>8. Ask patient to catch objects and say the shape of that object keeping eyes closed</li> <li>9. Confirm sensation.</li> <li>10. Keep records.</li> </ol>	<p><b><u>Condition (Given):</u></b> Client.</p> <p><b><u>Task (What):</u></b> Examine skin sensation</p> <p><b><u>Standards (How well):</u></b></p> <ul style="list-style-type: none"> <li>• Performed the examination.</li> </ul>	<p><b><u>Skin sensation :</u></b></p> <ul style="list-style-type: none"> <li>• Types of sensation: Touch, pain, pressure, heat, cold, proprioception and stereognosis</li> <li>• Hyper and hypo sensitivity.</li> <li>• Concept of testing skin sensation</li> </ul>

Tools/equipments/materials: Brush, Pin, Heat, Ice, solid objects.



## Module 5: Assistance to physically challenged persons

### Description:

It consists of the skills and knowledge related to the assistance to the physically challenged persons. Each task structure consists of steps, terminal performance objective [TPO], and related technical knowledge concerned with the task.

### Objectives:

After its completion the trainees will be able:

1. To assist to transfer patient
2. To assist to patient mobility
3. To assist in gait training
4. To assist in preparing stump for prosthesis
5. To assist in use of assistive devices
6. To assist in care and maintenance of assistive devices

### Tasks:

1. Assist to transfer patient from bed to wheel chair
2. Assist to patient mobility
3. Assist in gait training
4. Assist in preparing stump for prosthesis
5. Assist in use of assistive devices
6. Assist in care and maintenance of assistive devices

#### **Task: 1** Assist to transfer patient

Performance steps	Terminal performance objectives	Related technical knowledge
1. A. Transfer from bed to wheel chair and vice versa Receive instructions. 2. Bring wheel chair near bed. 3. Lock wheels. 4. Ask patient to move his legs out of bed to the site of wheel chair. 5. Ask to turn to the side of wheelchair. 6. Ask to raise head and trunk with the help of hand 7. Ask to grip arm of wheelchair. 8. Ask to transfer to wheelchair. 9. B. Transfer spinal injuries cases 10. Keep records. 11. C.	<p><b><u>Condition (Given):</u></b> Client.</p> <p><b><u>Task (What):</u></b> Transfer a patient from bed to Wheelchair.</p> <p><b><u>Standards (How well):</u></b></p> <ul style="list-style-type: none"> <li>• Transferred the patient correctly.</li> </ul>	<p><b><u>Assisting to transfer patient from bed to wheel chair:</u></b></p> <ul style="list-style-type: none"> <li>• Locking and unlocking of wheel chair</li> <li>• Passive and active transfer</li> <li>• Gripping and moving</li> <li>• Safety precautions</li> </ul>

Tools/ equipments/materials: Wheelchair.

Safety : Check air pressure of wheels, breaks and handles.

**Task: 2** Assist to Patient Mobility (Crutch, wheel chair, walker, parallel bar, stick)

<b>Performance steps</b>	<b>Terminal performance objectives</b>	<b>Related technical knowledge</b>
<ol style="list-style-type: none"> <li>1. Review signs and complication of spinal./spinal cord injuries</li> <li>2. Identify the site of injury.</li> <li>3. Call other two persons to help.</li> <li>4. Place your both hands just below the injured part.</li> <li>5. Ask one person to place his hands below head.</li> <li>6. Ask other person to place his hands to the legs.</li> <li>7. Pick up the patient once at a time preventing movement at the injured site.</li> <li>8. Keep records.</li> </ol>	<p><b><u>Condition (Given):</u></b> Client.</p> <p><b><u>Task (What):</u></b> Assist to transfer spinal injury cases from bed to stretcher and Vice versa.</p> <p><b><u>Standards (How well):</u></b></p> <ul style="list-style-type: none"> <li>• Performed all the steps in sequence.</li> </ul>	<p><b><u>Assisting to transfer spinal injury cases from bed to stretcher:</u></b></p> <ul style="list-style-type: none"> <li>• Signs and complications of spinal injuries.</li> <li>• Placement of hands</li> <li>• Safe transfer</li> <li>• Safety precautions</li> </ul>

Tools/equipments/materials: Patient bed, stretcher.

Safety: Do not bend / move the site of injury, check breaks and wheels of stretcher.

**Task: 3** Assist in crutch walking.

<b>Performance steps</b>	<b>Terminal performance objectives</b>	<b>Related technical knowledge</b>
<ol style="list-style-type: none"> <li>1. Receive instructions</li> <li>2. Measure length of crutch with shoe on.</li> <li>3. Measure length with shoe off..</li> <li>4. Measure length for hand piece.</li> <li>5. Confirm the length.</li> <li>6. Ask the patient to take crutches</li> <li>7. Ask to put auxiliary pad at a point 5 cm. below the apex of the axila.</li> <li>8. Place the crutches in a triangular shape with your feet.</li> <li>9. Ask the patient to walk in required gait (2point / 3 point / 4 point).               <ol style="list-style-type: none"> <li>(I) Ask the patient to walk in 3 point gait:                   <ul style="list-style-type: none"> <li>• Ask the patient to walk in normal crutch</li> </ul> </li> </ol> </li> </ol>	<p><b><u>Condition (Given):</u></b> Client and materials</p> <p><b><u>Task (What):</u></b> Assist in crutch walking.</p> <p><b><u>Standards (How well):</u></b></p> <ul style="list-style-type: none"> <li>• Followed all the steps in</li> </ul>	<p><b><u>Assisting in crutch walking:</u></b></p> <ul style="list-style-type: none"> <li>• Measurement of crutches on shoe on and shoe off.</li> <li>• Crutch gait:           <ul style="list-style-type: none"> <li>▪ Two point</li> <li>▪ Three point</li> <li>▪ Four point</li> <li>▪ Swing to</li> <li>▪ Swing thro'</li> </ul> </li> </ul>

<ul style="list-style-type: none"> <li>• Ask the patient to walk in abnormal crutch</li> <li>• Ask the patient to walk in normal leg.</li> </ul> <p>(ii) Ask the patient to walk in 4 point gait (progression of 3 pt.):</p> <ul style="list-style-type: none"> <li>• Ask the patient to walk in normal crutch</li> <li>• Ask the patient to walk in abnormal leg</li> <li>• Ask the patient to walk in abnormal crutch</li> <li>• Ask the patient to walk in normal leg</li> </ul> <p>(iii) Ask the patient to walk in 2 point gait (progression of 4 pt.):</p> <ul style="list-style-type: none"> <li>• Ask the patient to walk in Rt. Leg and Lt. crutch</li> <li>• Ask the patient to walk in Lt. leg and Rt. Crutch</li> </ul> <p style="text-align: center;">or</p> <ul style="list-style-type: none"> <li>• Ask the patient to walk in Rt. Leg and Rt. Crutch</li> <li>• Ask the patient to walk in Lt. leg and Lt. crutch</li> </ul> <p>(iv) Ask the patient to walk in swing to gait:</p> <ul style="list-style-type: none"> <li>• Ask the patient to walk by moving both crutches together.</li> <li>• Ask the patient to walk by moving both legs up to the level of crutches.</li> </ul> <p>(v) Ask the patient to walk in swing through gait:</p> <ul style="list-style-type: none"> <li>• Ask the patient to walk by moving both legs together</li> <li>• Ask the patient to walk by moving both legs beyond the level of crutches.</li> </ul> <p>10. Confirm the gaits.</p>	<p>sequence.</p> <ul style="list-style-type: none"> <li>• Performed crutch walking.</li> </ul>	
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Tools / equipment / materials: Auxiliary crutch.

**Task: 4** Assist in preparing stump for prosthesis.

Performance steps	Terminal performance objectives	Related technical knowledge
<ol style="list-style-type: none"> <li>1. Check stump wound.</li> <li>2. Confirm dressing.</li> <li>3. Apply figure of eight bandage.</li> </ol>	<p><b><u>Condition (Given):</u></b> Client</p> <p><b><u>Task (What):</u></b></p>	<p><b><u>Assisting in preparing stump for prosthesis:</u></b></p> <ul style="list-style-type: none"> <li>• Concept of stump</li> </ul>

<ol style="list-style-type: none"> <li>4. Give compression to the site of amputation.</li> <li>5. Check wound healing.</li> <li>6. Ask patient to bear body weight on the stump.</li> <li>7. Check scar.</li> <li>8. Confirm the scar for prosthesis.</li> </ol>	<p>Prepare a stump for prosthesis.</p> <p><b><u>Standards (How well):</u></b></p> <ul style="list-style-type: none"> <li>• Followed all steps in sequence.</li> </ul>	<ul style="list-style-type: none"> <li>• Types of amputation stump</li> <li>• Preparation of stump for prosthesis.</li> </ul>
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Tools / equipments / materials: Crepe bandage, Vacuum compressor.

**Task 5: Assist in applying Orthosis and Prosthesis**

<b>Performance steps</b>	<b>Terminal performance objectives</b>	<b>Related technical knowledge</b>
<ol style="list-style-type: none"> <li>1. Familiarize with the name and types Orthosis and Prosthesis</li> <li>2. Identify the site to be used.</li> <li>3. Identify the devices according to condition.</li> <li>4. Identify the size.</li> <li>5. Apply it to the required site.</li> <li>6. Ask patient for any discomfort or pain.</li> <li>7. Keep records.</li> </ol>	<p><b><u>Condition (Given):</u></b> Client.</p> <p><b><u>Task (What):</u></b> Assist in applying assistive devices.</p> <p><b><u>Standards (How well):</u></b></p> <ul style="list-style-type: none"> <li>• Applied the required devices</li> </ul>	<p><b><u>Assisting in applying splints/braces:</u></b></p> <ul style="list-style-type: none"> <li>• Types of Orthosis and Prosthesis</li> <li>• Role and Importance of orthosis and prosthesis</li> <li>• Application of devices</li> </ul>

Tools/equipments/materials: Splints, braces.

**Task 6: Assist in care and maintenance of assistive devices**

<b>Performance steps</b>	<b>Terminal performance objectives</b>	<b>Related technical knowledge</b>
<ol style="list-style-type: none"> <li>1. Familiarize with the Dos and Donts while using assistive devices</li> <li>2. Observe the adjustment techniques of size of the devices.</li> <li>3. Identify the possible dysfunction of devices</li> <li>4. Familiarise with skin care and care of device</li> <li>5. Observe the maintenance procedures.</li> <li>6. Confirm the defect of devices</li> <li>7. Keep records.</li> </ol>	<p><b><u>Condition (Given):</u></b> Assistive device.</p> <p><b><u>Task (What):</u></b> Assist in care of assistive devices.</p> <p><b><u>Standards (How well):</u></b></p> <ul style="list-style-type: none"> <li>• Applied the required devices</li> </ul>	<p><b><u>Assisting in caring devices:</u></b></p> <ul style="list-style-type: none"> <li>• Caring and Maintenance of assistive devices</li> </ul>

Tools/equipments/materials: Splints, braces, walking aids.

## **Module: 6: Therapeutic exercises**

### **Description:**

It consists of the skills and knowledge related to therapeutic exercises. Each task structure consists of steps, terminal performance objective [TPO], and related technical knowledge concerned with the task.

### **Objectives:**

After its completion the trainees will be able to:

- Assist to perform relaxed passive movements
- Assist to perform stretching exercises
- Assist to perform strengthening exercises (Isometric and Isotonic)
- Assist to perform active exercises
- Assist to perform mobilization of joint
- Assist to perform balance and coordination exercises
- Assist to perform exercises for neck muscles
- Assist to perform exercises for trunk muscles
- Assist to perform joint exercise
- Assist to perform breathing exercises
- Assist to perform facial exercises

### **Tasks:**

1. Assist to perform relaxed passive movements
2. Assist to perform stretching exercises
3. Assist to perform strengthening exercises (Isometric and Isotonic)
4. Assist to perform active exercises
5. Assist to perform mobilization of joint
6. Assist to perform balance and coordination exercises
7. Assist to perform exercises for neck muscles
8. Assist to perform exercises for trunk muscles
9. Assist to perform joint exercise
10. Assist to perform breathing exercises
11. Assist to perform facial exercises

**Task: 1** Facilitate to perform relaxed passive movements.

Performance steps	Terminal performance objectives	Related technical knowledge
<ol style="list-style-type: none"> <li>1. Position patient in supine.</li> <li>2. Confirm patient's comfort.</li> <li>3. Identify the part to be moved.</li> <li>4. Grasp proximal part of joint with one hand.</li> <li>5. Grasp distal part with other hand.</li> <li>6. Move the distal part up to the available range smoothly.</li> <li>7. Confirm range of motion</li> <li>8. Keep records.</li> </ol>	<p><b><u>Condition (Given):</u></b> Client.</p> <p><b><u>Task (What):</u></b> Facilitate to perform relaxed passive movements.</p> <p><b><u>Standards (How well):</u></b></p> <ul style="list-style-type: none"> <li>• Performed all steps in sequence.</li> </ul>	<p><b><u>Relaxed passive movements:</u></b></p> <ul style="list-style-type: none"> <li>• Definition, indication, and contraindication of passive exercises.</li> <li>• Grasping and moving of parts.</li> </ul>

Tools / equipments / materials: Patient bed.

**Task: 2** Facilitate to perform stretching exercises.

Performance steps	Terminal performance objectives	Related technical knowledge
<ol style="list-style-type: none"> <li>1. Identify the site.</li> <li>2. Palpate the muscle.</li> <li>3. Position the patient.</li> <li>4. Grasp proximal part with one hand.</li> <li>5. Grasp distal part with other hand.</li> <li>6. Pull the muscle to the distal.</li> <li>7. Confirm the muscle has crossed elastic range.</li> <li>8. Repeat the process.</li> <li>9. Keep records.</li> <li>10. Refer to higher centre if not stretched manually.</li> </ol>	<p><b><u>Condition (Given):</u></b> Client.</p> <p><b><u>Task (What):</u></b> Facilitate to perform stretching exercises.</p> <p><b><u>Standards (How well):</u></b></p> <ul style="list-style-type: none"> <li>• Performed stretching exercises.</li> </ul>	<p><b><u>Stretching exercises:</u></b></p> <ul style="list-style-type: none"> <li>• Elastic and plastic range</li> <li>• Patient position for stretching</li> <li>• Grasping and pulling techniques</li> </ul>

**Task: 3** Facilitate to perform strengthening exercises (Isometric and Isotonic).

<b>Performance steps</b>	<b>Terminal performance objectives</b>	<b>Related technical knowledge</b>
<ol style="list-style-type: none"> <li>1. Identify the muscle to be strengthened.</li> <li>2. Asses power of the muscle.</li> <li>3. Find out amount of resistance that can be applied.</li> <li>4. Position the patient as required.</li> <li>5. Apply resistance to the distal part.</li> <li>6. Ask patient to make tight the muscle, without any movement, with or without weight.</li> <li>7. Ask the patient to move and hold distal part with or without resistance.</li> <li>8. Increase the resistance (weight) as the power increases.</li> <li>9. Ask patient to repeat the exercise at least ten times and twice a day.</li> <li>10. 10 Keep records.</li> <li>11. Refer to higher centre if no progression.</li> </ol>	<p><b><u>Condition (Given):</u></b> Client.</p> <p><b><u>Task (What):</u></b> Facilitate to perform strengthening exercises (Isometric and Isotonic).</p> <p><b><u>Standards (How well):</u></b></p> <ul style="list-style-type: none"> <li>• Achieved 70% success in performing strengthening and endurance exercises.</li> </ul>	<p><b><u>Strengthening exercises (Isometric and Isotonic):</u></b></p> <ul style="list-style-type: none"> <li>• Definition, Indication and contraindication of strengthening exercises.</li> <li>• Isotonic and Isometric exercises</li> <li>• Identification of accurate</li> <li>• Weight /resistance for the exercises.</li> <li>• Difference between power and endurance</li> <li>• Concept of improvement of power and endurance</li> </ul>

Tools/equipment/materials: Spring, Weigh cuff, Sand bags, Theraband.

**Task: 4** Facilitate to perform active exercises.

<b>Performance steps</b>	<b>Terminal performance objectives</b>	<b>Related technical knowledge</b>
<ol style="list-style-type: none"> <li>1. Receive instructions</li> <li>2. Identify the part</li> <li>3. Asses muscle power</li> <li>4. Position the patient</li> <li>5. Ask patient to move the part to the normal anatomical direction of movement.</li> <li>6. Assist to move with your hand if the patient's muscular effort is not sufficient to move.</li> <li>7. Assist the patient in his inability to move the required part and apply resistance to the part against the direction of movement if he can move with his muscular effort.</li> <li>8. Apply resistance to the part against the direction of movement.</li> <li>9. Ask patient to move his weak limb to that direction of movement in which a person moves for his normal daily activities.</li> </ol>	<p><b><u>Condition (Given):</u></b> Client and resistance.</p> <p><b><u>Task (What):</u></b> Facilitate to perform active exercises</p> <p><b><u>Standards (How well):</u></b></p> <ul style="list-style-type: none"> <li>• Performed 60% of the task.</li> </ul>	<p><b><u>Active exercises:</u></b></p> <ul style="list-style-type: none"> <li>• Definition, types, indication and contraindication of active exercises</li> <li>• Assisted exercises</li> <li>• Assisted-resisted exercises</li> <li>• Resisted exercises</li> <li>• Free active exercises</li> <li>• Identification and application of resistance</li> <li>• ADL exercises</li> </ul>

Tools / equipments / materials: Springs, Weighs, Theraband.



**Task: 5** Facilitate to perform mobilization of joint:

<b>Performance steps</b>	<b>Terminal performance objectives</b>	<b>Related technical knowledge</b>
<ol style="list-style-type: none"> <li>1. Identify the joint.</li> <li>2. Asses the range of motion.</li> <li>3. Prepare patient for mobilization</li> <li>4. Grasp proximal and distal to the joint with your hand.</li> <li>5. Move joint in small range but in high frequency.</li> <li>6. Glide joint in different direction</li> <li>7. Confirm the movement and increase in range of motion..</li> <li>8. Keep records</li> <li>9. Refer to higher centre if the joint range is not increased or is very painful</li> </ol>	<p><b><u>Condition (Given):</u></b> Client.</p> <p><b><u>Task (What):</u></b> Facilitate to perform mobilization of joint.</p> <p><b><u>Standards (How well):</u></b></p> <ul style="list-style-type: none"> <li>• All steps followed in sequence.</li> <li>• Performed 70% of the task.</li> </ul>	<p><b><u>Mobilization of joint:</u></b></p> <ul style="list-style-type: none"> <li>• Cause of joint stiffness</li> <li>• Techniques of releasing stiffness</li> <li>• Patient preparation</li> <li>• Grasping and moving joints</li> <li>• Gliding and manipulation of joints</li> </ul>

**Task: 6** Facilitate to perform balance and coordination exercises

<b>Performance steps</b>	<b>Terminal performance objectives</b>	<b>Related technical knowledge</b>
<ol style="list-style-type: none"> <li>1. Asses patient</li> <li>2. Identify the condition.</li> <li>3. Make a plan for exercises according to diagnosis.</li> <li>4. Collect materials.</li> <li>5. Perform finger exercises.</li> <li>6. Perform hand exercises.</li> <li>7. Perform leg exercises.</li> <li>8. Perform foot exercises.</li> <li>9. Perform trunk exercises.</li> <li>10. Perform functional activities.</li> </ol>	<p><b><u>Condition (Given)</u></b> Client.</p> <p><b><u>Task (What):</u></b> Facilitate to perform balance and coordination exercises</p> <p><b><u>Standards (How well):</u></b></p> <ul style="list-style-type: none"> <li>• Performed 70% of the task.</li> </ul>	<p><b><u>Balance and coordination exercises:</u></b></p> <ul style="list-style-type: none"> <li>• Definition and Diagnosis of</li> <li>• balance and coordination disorders</li> <li>• Balance and coordination exercises for finger, hand, leg,</li> <li>• foot and trunk</li> <li>• Free active activities</li> </ul>

Tools / equipments / materials: Exercise ball, finger exerciser, balance boards, coordination exerciser, parallel bar.

**Task: 7** Facilitate to perform exercises for neck muscles.

<b>Performance steps</b>	<b>Terminal performance objectives</b>	<b>Related technical knowledge</b>
<p>A Perform isometric exercises:</p> <ol style="list-style-type: none"> <li>1. Position patient in high sitting.</li> <li>2. Ask to look straight forward.</li> <li>3. Ask to keep hands on front of head.</li> <li>4. Ask to press each other with equal force so that the head remains static.</li> <li>5. Ask patient to keep both hands on back of head and do the same as above.</li> <li>6. Ask to keep one hand on either side of head and press each other.</li> <li>7. Ask to keep hands below chin and push down.</li> </ol> <p>B. Perform isotonic exercises:</p> <ol style="list-style-type: none"> <li>1. Ask to move head up and down.</li> <li>2. Ask to look tip of shoulder.</li> <li>3. Ask to rotate head in clockwise and anticlockwise direction.</li> <li>4. Refer patient to higher centre if pain increases or dizziness / vertigo presents.</li> </ol>	<p><b><u>Condition (Given):</u></b> Client</p> <p><b><u>Task (What):</u></b> Facilitate to perform exercises for neck muscles.</p> <p><b><u>Standards (How well):</u></b></p> <ul style="list-style-type: none"> <li>• Performed the exercises perfectly.</li> </ul>	<p><b><u>Exercises for neck muscles:</u></b></p> <ul style="list-style-type: none"> <li>• Indication and contraindication of exercises for neck muscles</li> <li>• Isometric and Isotonic exercises</li> <li>• Neck care</li> </ul>

Tools / equipments / materials: Chair

**Task: 8 Facilitate** to perform exercises for trunk muscles.

Performance steps	Terminal performance objectives	Related technical knowledge
<p>Perform extensor exercises:</p> <ol style="list-style-type: none"> <li>1. Ask patient to lie on his back with knee flexed.</li> <li>2. Ask to raise hip and hold it for 5 to 10 second.</li> <li>3. Ask to rotate flexed knees on both sides.</li> <li>4. Ask to lie on his abdomen.</li> <li>5. Ask to raise straight leg alternatively.</li> <li>6. Ask to raise head and trunk.</li> <li>7. Ask to raise alternate hand and leg together.</li> <li>8. Ask to make curve on back raising head, trunk and legs with abdominal support.</li> <li>9. Ask to be in prone kneeling position and raise straight leg alternatively.</li> <li>10. Ask to lie on exercise ball in prone and raise head and legs.</li> </ol> <p>Perform flexor exercises:</p> <ol style="list-style-type: none"> <li>1. Ask patient to lie on his back.</li> <li>2. Ask to bend a knee and pull it to abdomen and hold for 10 sec.</li> <li>3. Ask to bend both knees and pull to abdomen and hold for 10 sec.</li> <li>4. Ask to look toes raising head.</li> <li>5. Ask to raise both legs up.</li> <li>6. Ask to sit with straight legs.</li> <li>7. Ask to touch toes.</li> <li>8. Ask to sit on chair and put palms on floor leaning trunk forward.</li> <li>9. Ask to lie on ball in supine.</li> <li>10. Ask to rise up head and legs.</li> <li>11. Refer to higher centre if pain increased or not improved or any other complications developed.</li> </ol>	<p><b><u>Condition (Given):</u></b> Client</p> <p><b><u>Task (What):</u></b> Facilitate to perform back Exercises.</p> <p><b><u>Standards (How well):</u></b></p> <ul style="list-style-type: none"> <li>• Performed 70% of the task.</li> </ul>	<p><b><u>Exercises for back:</u></b></p> <ul style="list-style-type: none"> <li>• Indication and contraindication of spinal exercises</li> <li>• Extensor exercises</li> <li>• Flexor /Abdominal exercises</li> </ul>

Tools / equipments / materials: Exercise bed

**Task: 9** Facilitate to perform joint exercises

<b>Performance steps</b>	<b>Terminal performance objectives</b>	<b>Related technical knowledge</b>
<ol style="list-style-type: none"> <li>1. Identify joint to be exercised.</li> <li>2. Position in its comfort.</li> <li>3. Ask to contract joint muscle.</li> <li>4. Ask to try to press or pull without moving the part.</li> <li>5. Ask to move joint to normal anatomical direction,</li> <li>6. Apply resistance to the moving part against the direction of movement.</li> </ol>	<p><b><u>Condition (Given):</u></b> Client.</p> <p><b><u>Task (What):</u></b> Facilitate to perform joint exercises</p> <p><b><u>Standard (How well):</u></b></p> <ul style="list-style-type: none"> <li>• Performed 70% of the task.</li> </ul>	<p><b><u>Joint exercises:</u></b></p> <ul style="list-style-type: none"> <li>• Indication and contraindication of exercises for joints</li> <li>• Isometric and Isotonic exercises with or without resistance</li> <li>• Joint care</li> </ul>

Tools / equipments / materials: Exercise bed, Chair, Theraband, springs

**Task: 10** Facilitate to perform breathing exercises

<b>Performance steps</b>	<b>Terminal performance objectives</b>	<b>Related technical knowledge</b>
<ol style="list-style-type: none"> <li>1. Receive instructions.</li> <li>2. Position patient in half lying.</li> <li>3. Place your hand on upper part of chest just below the clavicle.</li> <li>4. Ask to take deep inspiration and expiration slowly.</li> <li>5. Press the chest with both hands in inspiration.</li> <li>6. Place both hands on just below the axilla.</li> <li>7. Press the chest forward and inward in inspiration..</li> <li>8. Place hands on lateral side of lower part of chest.</li> <li>9. Apply pressure forward and inward in inspiration.</li> <li>10. Place hands on the margin between chest and abdomen.</li> <li>11. Apply forward pressure in inspiration.</li> </ol>	<p><b><u>Condition (Given):</u></b> Client.</p> <p><b><u>Task (What):</u></b> Facilitate to perform breathing exercises.</p> <p><b><u>Standards (How well):</u></b></p> <ul style="list-style-type: none"> <li>• Performed all steps in sequence.</li> </ul>	<p><b><u>Breathing exercises:</u></b></p> <ul style="list-style-type: none"> <li>• Muscles of respiration</li> <li>• Mechanics of respiration</li> <li>• Indication and contraindication</li> <li>• Resisted and assisted breathing.</li> <li>• Apical, costal , diaphragmatic and segmental breathing</li> </ul>

Tools / equipments / materials: Exercise bed, Pillows, Chest belt

**Task: 11** Facilitate to perform facial exercises.

Performance steps	Terminal performance objectives	Related technical knowledge
<ol style="list-style-type: none"> <li>1. Ask patient to sit in front of mirror.</li> <li>2. Ask to move eyebrows up and down.</li> <li>3. Ask to close and open eyes.</li> <li>4. Ask to draw eyebrows to midline.</li> <li>5. Ask to sniff.</li> <li>6. Ask to blow mouth.</li> <li>7. Ask to whistle.</li> <li>8. Ask to draw angle of mouth outwards.</li> <li>9. Ask to make lips tight.</li> <li>10. Ask to chew on affected side.</li> </ol>	<p><b><u>Condition (Given):</u></b> Client.</p> <p><b><u>Task (What):</u></b> Facilitate to perform facial exercises</p> <ul style="list-style-type: none"> <li>• <b><u>Standards (How well):</u></b> Performed 70% of the task.</li> </ul>	<p><b><u>Facial exercises:</u></b></p> <ul style="list-style-type: none"> <li>• Differentiation between Bell’s palsy and Facial palsy</li> <li>• Indication and contraindication of facial exercises</li> <li>• Concept of facial exercises</li> </ul>

Tools / equipments / materials: Exercise bed, Mirror

## **Module: 7: Rehabilitation of orthopedic cases**

**Description:**

It consists of the skills and knowledge related to rehabilitation of orthopedic cases. Each task structure consists of steps, terminal performance objective [TPO], and related technical knowledge concerned with the task.

**Objectives:**

After its completion the trainees will be able to:

- Assist to rehabilitation of soft tissue injuries
- Assist to rehabilitation of fractures
- Assist to rehabilitation of subluxation and dislocation
- Assist to rehabilitation of Arthritis
- Assist to rehabilitation of muscular dystrophy
- Assist to rehabilitation of burn cases
- Assist to rehabilitation of deformities
- Assist to rehabilitation of back/neck pain

**Tasks:**

1. Assist to rehabilitation of soft tissue injuries
2. Assist to rehabilitation of fractures
3. Assist to rehabilitation of subluxation and dislocation
4. Assist to rehabilitation of Arthritis
5. Assist to rehabilitation of muscular dystrophy
6. Assist to rehabilitation of burn cases
7. Assist to rehabilitation of deformities
8. Assist to rehabilitation of back/neck pain



**Task: 1** Facilitate rehabilitation of soft tissue injuries

Performance steps	Terminal performance objectives	Related technical knowledge
<p>1. Receive instruction 2. Asses the injury</p> <p><b>Carry out immediate management:</b></p> <p>1. Advice to take rest. 2. Immobilize the part. 3. Elevate the part. 4. Apply ice if pain and swelling. 5. Teach three point gait in case of 2nd or 3<sup>rd</sup> grade injury to the lower extremities. 6. Refer for ultrasonotherapy and pulsed electromagnetic energy (PEME) if available.</p> <p><b>Carry out secondary management:</b></p> <p>1. Move other joints proximal and distal to the site of injury 2. Perform isometric exercises. 3. Suggest for UST and PEME. 4. Teach four point gaits. 5. Mobilize joint passively after removal of cast. 6. Perform free active exercises. 7. Perform resisted exercises. 8. Apply heat if pain and stiffness. 9. Perform ROM exercises. 10. Teach two point gait 11. Keep records, 12. Refer to higher centre if pain and swelling continues or ROM is not improved.</p>	<p><b><u>Condition (Given):</u></b> Client.</p> <p><b><u>Task(What):</u></b> Facilitate rehabilitate of soft tissue injuries of required grade.</p> <p><b><u>Standards (How well):</u></b></p> <ul style="list-style-type: none"> <li>• Performed 70 of the task.</li> </ul>	<p><b><u>Rehabilitation of soft tissue injuries:</u></b></p> <ul style="list-style-type: none"> <li>• Definition of strain and sprain</li> <li>• Grades of soft tissue injury.</li> <li>• Primary and secondary management</li> <li>• Effects of heat, ice, UST and PEME on rehabilitation of fractures</li> <li>• Exercises on splint / cast</li> <li>• Exercises after removing cast</li> <li>• Crutch gait</li> </ul>

Tools / equipments / Materials: Bandage/Cast, Walking aids, Ice, and heat.

**Task: 2** Facilitate rehabilitation of fractures

Performance steps	Terminal performance objectives	Related technical knowledge
<ol style="list-style-type: none"> <li>1. Receive instruction</li> <li>2. Asses fracture</li> </ol> <p><b>Carry out immediate management:</b></p> <ol style="list-style-type: none"> <li>3. Assist reduction and immobilization of fracture.</li> <li>4. Teach crutch walking in case of lower extremities.</li> <li>5. Suggest for PEME.</li> <li>6. Facilitate isometric exercises.</li> <li>7. Facilitate mobilization of joints proximal and distal to the site of injury.</li> </ol> <p><b>Carry out secondary management:</b></p> <ol style="list-style-type: none"> <li>8. Continue PEME.</li> <li>9. Perform strengthening exercises.</li> <li>10. Teach four point gaits.</li> <li>11. Remove cast if the fracture healed.</li> <li>12. Apply heat.</li> <li>13. Perform ROM exercises if joints are stiff.</li> <li>14. Prescribe for UST if joints are stiff.</li> <li>15. Teach two point gaits.</li> <li>16. Keep records.</li> <li>17. Refer to higher centre if any complication of fracture.</li> </ol>	<p><b><u>Condition (Given):</u></b> Client.</p> <p><b><u>Task (What):</u></b> Facilitate rehabilitate a fracture.</p> <p><b><u>Standards (How well):</u></b></p> <ul style="list-style-type: none"> <li>• Performed 70% of the task.</li> </ul>	<p><b><u>Rehabilitation of fractures:</u></b></p> <ul style="list-style-type: none"> <li>• Definition, types and management of fractures.</li> <li>• Complications of fracture</li> <li>• Exercises on immobilization period</li> <li>• Exercises on mobilization period</li> <li>• Crutch gait</li> <li>• Effects of heat, ice, UST and PEME on rehabilitation of fractures</li> </ul>

Tools / equipments / materials: Bandage/cast/splint/crutch/heat/CPM.



**Task: 3** Facilitate rehabilitation of subluxation and dislocation

<b>Performance steps</b>	<b>Terminal performance objectives</b>	<b>Related technical knowledge</b>
<ol style="list-style-type: none"> <li>1. Asses the joint.</li> <li>2. Confirm the subluxation and dislocation.</li> <li>3. Confirm immobilization.</li> <li>4. Teach isometric exercises of the muscles of injured joint.</li> <li>5. Mobilize proximal and distal joints.</li> <li>6. Strengthen the muscle of proximal and distal part of the joint.</li> <li>7. Mobilize the injured joint when required.</li> <li>8. Perform ROM exercises.</li> <li>9. Suggest UST and deep heat for stiff large joints.</li> <li>10. Refer to higher centre if not improved.</li> </ol>	<p><b><u>Condition (Given):</u></b> Client.</p> <p><b><u>Task (What):</u></b> Facilitate rehabilitation of subluxation and dislocation.</p> <p><b><u>Standards (How well):</u></b></p> <ul style="list-style-type: none"> <li>• Performed 70% of the task.</li> </ul>	<p><b><u>Rehabilitation of subluxation and dislocation:</u></b></p> <ul style="list-style-type: none"> <li>• Definition, management and complications of dislocation and subluxation of joint</li> <li>• Effects of UST</li> <li>• Exercises on immobilized period</li> <li>• Exercises on mobilized period</li> </ul>

Tools/equipments/materials: Heat, CPM.

**Task: 4** Facilitate rehabilitation of Arthritis.

<b>Performance steps</b>	<b>Terminal performance objectives</b>	<b>Related technical knowledge</b>
<ol style="list-style-type: none"> <li>1. Asses the joint.</li> <li>2. Confirm degeneration / inflammation / infection.</li> <li>3. Teach joint care.</li> <li>4. Ask to apply orthoses if required.</li> <li>5. Teach isometric exercises for the joint.</li> <li>6. Teach isotonic exercises for the joint.</li> <li>7. Apply ice in painful swollen joint.</li> <li>8. Apply heat in painful joint.</li> <li>9. Suggest TENS, IFT. SWD, MWD to relieve pain.</li> <li>10. Refer to higher centre if no improvement or any complication.</li> </ol>	<p><b><u>Condition (Given):</u></b> Client.</p> <p><b><u>Task (What):</u></b> Facilitate rehabilitation of arthritis.</p> <p><b><u>Standards (How well):</u></b></p> <ul style="list-style-type: none"> <li>• Performed 70% of the task.</li> </ul>	<p><b><u>Rehabilitation of Arthritis:</u></b></p> <ul style="list-style-type: none"> <li>• Definition and complication of arthritis.</li> <li>• Joint care.</li> <li>• Indication and contraindication of exercises for arthritis.</li> <li>• Effects of deep and superficial heat, low and high frequency current</li> <li>• Isometric and isotonic exercises</li> <li>• Splinting / bracing</li> </ul>

Tools/equipments/materials: Heat, orthoses.

**Task: 5** Facilitate rehabilitation of muscular dystrophy

<b>Performance steps</b>	<b>Terminal performance objectives</b>	<b>Related technical knowledge</b>
<ol style="list-style-type: none"> <li>1. Asses muscle power.</li> <li>2. Make a plan of strengthening exercises according to muscle power.</li> <li>3. Perform strengthening exercises for limbs, neck and trunk.</li> <li>4. Advice for braces or splints for spine and joints if needed.</li> <li>5. Perform breathing exercises.</li> <li>6. Perform stretching exercises if needed</li> <li>7. Teach techniques of using walking aids.</li> <li>8. Refer to higher centre if not improved.</li> </ol>	<p><b><u>Condition (Given):</u></b> Client.</p> <p><b><u>Task (What):</u></b> Facilitate rehabilitation of muscular dystrophy.</p> <p><b><u>Standards (How well):</u></b></p> <ul style="list-style-type: none"> <li>• Performed 70% of the task.</li> </ul>	<p><b><u>Rehabilitation of muscular dystrophy:</u></b></p> <ul style="list-style-type: none"> <li>• Definition, types and</li> <li>• Techniques of rehabilitation of muscular dystrophy.</li> <li>• Muscle strengthening exercises</li> <li>• Cardiopulmonary care</li> <li>• Application of orthoses and walking aids</li> </ul>

**Task: 6** Facilitate rehabilitation of burn cases

<b>Performance steps</b>	<b>Terminal performance objectives</b>	<b>Related technical knowledge</b>
<ol style="list-style-type: none"> <li>1. Receive patient</li> <li>2. Take history</li> <li>3. Assist patient.</li> <li>4. Find out the condition of wound.</li> <li>5. Suggest care of wound if not healed.</li> <li>6. Maintain position of the part to prevent contracture.</li> <li>7. Apply splints if needed.</li> <li>8. Perform stretching exercises to lengthen the shortened soft tissues.</li> <li>9. Perform strengthening exercises.</li> <li>10. Suggest for UST to remove scar.</li> <li>11. Perform massage (Friction / Kneading).</li> <li>12. Refer to higher centre if any complication or no improvement.</li> </ol>	<p><b><u>Condition (Given)</u></b> Client.</p> <p><b><u>Task (What):</u></b> Facilitate rehabilitation of burns cases.</p> <p><b><u>Standards (How well):</u></b></p> <ul style="list-style-type: none"> <li>• Performed 70% of the task.</li> </ul>	<p><b><u>Rehabilitation of burn cases:</u></b></p> <ul style="list-style-type: none"> <li>• Complication, care and rehabilitation of burn cases</li> <li>• Stretching exercises</li> <li>• Strengthening exercises</li> <li>• Soft tissue technique for removing scars</li> </ul>

Tools/equipments/materials: Bandages, splints, oil.

- **Task: 5** Assist to rehabilitate deformities

<b>Performance steps</b>	<b>Terminal performance objectives</b>	<b>Related technical knowledge</b>
<ol style="list-style-type: none"> <li>1. Familiarize with congenital and acquired deformities</li> <li>2. Identify the deformities of limbs</li> <li>3. Make a plan of correcting deformities</li> <li>4. Assist in performing stretching exercises if the deformity is due to shortening of soft tissues</li> <li>5. Advice for cast, braces or splints if needed.</li> <li>6. Assist in performing muscle strengthening exercises.</li> <li>7. Assist in performing joint gliding if the deformity is due to adhesions.</li> <li>8. Keep records</li> <li>9. Refer to higher centre if not improved.</li> </ol>	<p><b><u>Condition (Given):</u></b> Client.</p> <p><b><u>Task (What):</u></b> Facilitate correction of deformities.</p> <p><b><u>Standards (How well):</u></b></p> <ul style="list-style-type: none"> <li>• Performed 70% of the task.</li> </ul>	<p><b><u>Rehabilitation of muscular dystrophy:</u></b></p> <ul style="list-style-type: none"> <li>• Definition, types and Techniques of deformity correction.</li> <li>• Application of cast, splint, braces and walking aids</li> </ul>

- **Task: 1** Assist to rehabilitate back/neck pain

<b>Performance steps</b>	<b>Terminal performance objectives</b>	<b>Related technical knowledge</b>
<ol style="list-style-type: none"> <li>1. Familiarize with different factors responsible for back pain and neck pain</li> <li>3. Receive instruction</li> <li>4. Confirm the condition with diagnosis.</li> <li>5. Advice the activities to be restricted</li> <li>6. Advice spinal brace.</li> <li>7. Assist to teach back care as per conditions.</li> <li>8. Assist to teach spinal isometric or isotonic exercises as per condition</li> <li>9. Suggest for superficial and deep heat modalities if available.</li> <li>13. Suggest for TENS, UST,</li> </ol>	<p><b><u>Condition (Given):</u></b> Client.</p> <p><b><u>Task(What):</u></b> Facilitate rehabilitation of Prolapsed Intervertebral Disk.</p> <p><b><u>Standards (How well):</u></b></p> <ul style="list-style-type: none"> <li>• Performed 70 of the task.</li> </ul>	<p><b><u>Rehabilitation PIVD:</u></b></p> <ul style="list-style-type: none"> <li>• Definition, cause, sign / symptoms and management of neck and back pain</li> <li>• Indication and contraindication of spinal flexor and extensor exercises</li> <li>• Definition of mechanical LBP, spondylosis, spondylolisthesis, retrolisthesis, pott's spine, kyphosis, lordosis, scoliosis</li> </ul>

<p>and SWD.</p> <p>14. Keep records,</p> <p>15. Refer to higher centre if pain continues or not improved.</p>		<ul style="list-style-type: none"> <li>• Back care</li>   <li>• Braces for back pain cases</li> </ul>
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Tools / equipments / materials: spinal braces, hot packs.

## **Module: 8: Rehabilitation of neurological cases**

### **Description:**

It consists of the skills and knowledge related to rehabilitation of neurological cases. Each task structure consists of steps, terminal performance objective [TPO], and related technical knowledge concerned with the task.

### **Objectives:**

After its completion the trainees will be able to:

- Assist rehabilitation of cerebrovascular accident (CVA)
- Assist rehabilitation of cerebral palsy
- Assist rehabilitation of spinal cord injuries
- Assist rehabilitation on peripheral nerve injury
- Assist rehabilitation of parkinson's disease
- Assist rehabilitation of Poliomyelitis

### **Tasks:**

1. Assist rehabilitation of cerebrovascular accident (CVA)
2. Assist rehabilitation of cerebral palsy
3. Assist rehabilitation of spinal cord injuries
4. Assist rehabilitation on peripheral nerve injury
5. Assist rehabilitation of parkinson's disease
6. Assist rehabilitation of Poliomyelitis

**Task: 1** Facilitate rehabilitation of cerebrovascular accident (CVA)

Performance steps	Terminal performance objectives	Related technical knowledge
<p>1. Receive patient.</p> <p>2. Asses followings of the patient:</p> <ul style="list-style-type: none"> <li>• Asses muscle tone</li> <li>• Asses coordination</li> <li>• Asses balance.</li> <li>• Asses range of motion</li> <li>• Asses muscle power.</li> <li>• Asses gait</li> <li>• Asses sensation</li> <li>• Asses speech</li> <li>• Asses hearing</li> <li>• Asses vision</li> <li>• Asses taste</li> <li>• Asses cognitive behavior</li> <li>• Asses pain</li> <li>• Asses psychological status</li> </ul> <p>3. Prepare a plan according to the present condition.</p> <p><b>Assist to perform the followings for paresis (hypotonia):</b></p> <p>4. Assist to apply following techniques for initiation of contraction</p> <ul style="list-style-type: none"> <li>• Apply tapping</li> <li>• Apply brushing</li> <li>• Apply quick Icing</li> <li>• Apply heating</li> <li>• Apply joint compression</li> <li>• Apply quick stretching</li> <li>• Apply electrical stimulation</li> <li>• Apply active assisted movements.</li> </ul> <p><b>Assist to perform the followings for Plegia (hypertonia):</b></p> <p>5. Apply following techniques for releasing spasticity:</p>	<p><b><u>Condition (Given):</u></b> Client.</p> <p><b><u>Task (What):</u></b> Facilitate rehabilitation of cerebrovascular accident (CVA)</p> <p><b><u>Standards (How well):</u></b></p> <ul style="list-style-type: none"> <li>• Performed 70% of the task.</li> </ul>	<p><b><u>Rehabilitation of cerebrovascular accident (CVA):</u></b></p> <ul style="list-style-type: none"> <li>• Definition, cause, clinical features and techniques of rehabilitation.</li> <li>• Assessment of stroke case</li> <li>• Initiation of contraction</li> <li>• Reeducation and strengthening exercises</li> <li>• Stretching exercises</li> <li>• Exercises for balance and coordination disorder</li> </ul>

<ul style="list-style-type: none"> <li>• Apply passive stretching</li> <li>• Apply prolong Icing</li> <li>• Apply prolong heating</li> <li>• Apply passive movements</li> <li>• Apply active exercises.</li> </ul> <p><b>Assist to perform followings for Incoordination:</b></p> <ol style="list-style-type: none"> <li>6. Coordination exercises.</li> <li>7. ADL exercises.</li> <li>8. Gait training.</li> </ol> <p><b>Assist to perform the followings for balance disorder</b></p> <ol style="list-style-type: none"> <li>9. Exercises for trunk balance.</li> <li>10. Exercises on ball.</li> <li>11. Exercises on balance board.</li> </ol> <p><b>Assist to perform the followings for Contractures:</b></p> <ol style="list-style-type: none"> <li>12. Stretching exercises</li> <li>13. Refer to concerning specialist for complications or associated problems if any.</li> <li>14. Refer to higher centre for better rehabilitation if not improved</li> </ol>		
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Tools / equipment / materials: Ice, heat, splints, walking aids, star case, Parallel bar, resistances (weigh cuffs, Theraband, springs).

**Task: 2** Facilitate rehabilitation of cerebral palsy.

Performance steps	Terminal performance objectives	Related technical knowledge
<ol style="list-style-type: none"> <li>1. Asses the patient</li> <li>2. Identify the problems.</li> <li>3. Make a plan of treatment according to problems: <ul style="list-style-type: none"> <li>• Make a plan of treatment for spasticity</li> <li>• Make a plan of treatment for rigidity</li> <li>• Make a plan of treatment for flaccidity</li> <li>• Make a plan of treatment for muscle weakness.</li> <li>• Make a plan of treatment for incoordination</li> <li>• Make a plan of treatment for contractures</li> <li>• Make a plan of treatment for deformities.</li> <li>• Make a plan of treatment for ADL Problems.</li> <li>• Make a plan of treatment for cognitive behavior.</li> </ul> </li> <li>4. Release spasticity/rigidity.</li> <li>5. Perform techniques for initiation of contraction if flaccid.</li> <li>6. Prevent contractures / deformities by splinting</li> <li>7. Correct contractures / deformities by stretching / splinting / orthoses.</li> <li>8. Strengthen weak muscles.</li> <li>9. Perform balance exercise.</li> <li>10. Perform gait training.</li> <li>11. Refer to physiotherapist for improvement of ADL.</li> <li>12. Refer to orthopedic surgeon for releasing contractures and for surgical correction of deformities.</li> <li>13. Refer to higher centre/ senior physiotherapist if not improved or any complication.</li> </ol>	<p><b><u>Condition (Given):</u></b> Client.</p> <p><b>Task (What):</b> Facilitate rehabilitation of cerebral palsy.</p> <p><b><u>Standards (How well):</u></b></p> <ul style="list-style-type: none"> <li>• Performed 70% of the task.</li> </ul>	<p><b><u>Rehabilitation of cerebral palsy:</u></b></p> <ul style="list-style-type: none"> <li>• Definition, causes, clinical features and management of cerebral palsy</li> <li>• Case assessment</li> <li>• Reeducation and strengthening exercises</li> <li>• Deformity correction: <ul style="list-style-type: none"> <li>▪ Positioning of limbs</li> <li>▪ Soft tissue stretching</li> <li>▪ Splinting</li> <li>▪ Application of orthoses</li> </ul> </li> <li>• Balance exercises</li> <li>• Gait training</li> <li>• Physiotherapy for CP child.</li> </ul>

Tools / equipment / materials: Heat, Cold, Ice, Standing frame, Prone board, CP chair, Exercise ball, Dolls, Walker, Parallel bar, Therabands, Springs, weighs, Staircase.



**Task: 3** Facilitate rehabilitation of spinal cord injuries

<b>Performance steps</b>	<b>Terminal performance objectives</b>	<b>Related technical knowledge</b>
<ol style="list-style-type: none"> <li>1. Locate the site of injury.</li> <li>2. Confirm immobilization .to prevent secondary injuries.</li> <li>3. Identify the problems.</li> <li>4. Provide nursing care.</li> <li>5. Perform bowel and bladder care</li> <li>6. Perform reeducation of bladder.</li> <li>7. Perform passive movements.</li> <li>8. Perform standing on tilting bed.</li> <li>9. Perform active exercises if muscle power is 2 or more.</li> <li>10. Perform reeducation exercises if power is less than 2.</li> <li>11. Perform stretching for contractures./ flexion deformities.</li> <li>12. Prescribe and assist in using orthoses.</li> <li>13. Prescribe and assist in using walking aids.</li> <li>14. Keep records.</li> <li>15. Refer to seniors for the management of complication or if no improvement.</li> </ol>	<p><b><u>Condition (Given):</u></b> Client.</p> <p><b><u>Task (What):</u></b> Facilitate rehabilitation of spinal cord injuries.</p> <p><b><u>Standards (How well):</u></b></p> <ul style="list-style-type: none"> <li>• Performed 70% of the task.</li> </ul>	<p><b><u>Rehabilitation of spinal cord injuries:</u></b></p> <ul style="list-style-type: none"> <li>• Clinical feature and rehabilitation of spinal cord injury at different level.</li> <li>• Nursing care</li> <li>• Bowel and bladder care</li> <li>• Bladder reeducation</li> <li>• Exercises for reeducation and strengthening</li> <li>• Application of orthoses</li> </ul>

Tools / equipments / materials: Bed, Wheel chair, parallel bar, tilting table, spinal brace, heat, Ice, weigh cuff, spring, theraband, walker, crutches.

**Task: 4** Facilitate rehabilitation on peripheral nerve injury

<b>Performance steps</b>	<b>Terminal performance objectives</b>	<b>Related technical knowledge</b>
<ol style="list-style-type: none"> <li>1. Identify the injured nerve.</li> <li>2. Confirm the types of injury.</li> <li>3. Assist to prevent deformities by splinting.</li> <li>4. Assist to perform strengthening exercises.</li> <li>5. Assist to perform free active exercises.</li> <li>6. Suggest for electric stimulation</li> <li>7. Refer to seniors if not improved.</li> </ol>	<p><b><u>Condition (Given):</u></b> Client.</p> <p><b><u>Task (What):</u></b> Perform techniques of rehabilitation of peripheral nerve injury.</p> <p><b><u>Standards (How well):</u></b></p> <ul style="list-style-type: none"> <li>• Performed 70% of the task.</li> </ul>	<p><b><u>Rehabilitation of peripheral nerve injury:</u></b></p> <ul style="list-style-type: none"> <li>• Types</li> <li>• Clinical features</li> <li>• Techniques of rehabilitation of peripheral nerve injury</li> </ul>

Tools, equipments / materials: Splint, reeducation board, weighs.

**Task: 5** Facilitate rehabilitation of Parkinson's disease

<b>Performance steps</b>	<b>Terminal performance objectives</b>	<b>Related technical knowledge</b>
<ol style="list-style-type: none"> <li>1. Asses the patient and find out problems: <ul style="list-style-type: none"> <li>• Asses patient for tremor</li> <li>• Asses patient for rigidity</li> <li>• Asses patient for bradikinesia</li> <li>• Asses patient for pain</li> <li>• Asses patient for postural problem</li> <li>• Asses patient for incoordination</li> <li>• Asses patient for balance disorder</li> <li>• Asses patient for deformity/contractures.</li> </ul> </li> <li>2. Assist to make a plan of treatment on the basis of features.</li> <li>3. Apply heat for pain</li> <li>4. Assist to perform massage.</li> <li>5. Assist to perform passive movements.</li> <li>6. Assist to perform passive stretching.</li> <li>7. Assist to Perform balance and</li> </ol>	<p><b><u>Condition (Given):</u></b> Client.</p> <p><b><u>Task (What):</u></b> Facilitate rehabilitation of parkinson's disease.</p> <p><b><u>Standards (How well):</u></b></p> <ul style="list-style-type: none"> <li>• Performed 70% of the task.</li> </ul>	<p><b><u>Rehabilitation of parkinson's disease:</u></b></p> <ul style="list-style-type: none"> <li>• Definition and clinical feature</li> <li>• Case assessment</li> <li>• Pain management</li> <li>• Exercises</li> <li>• Posture correction</li> <li>• Gait training</li> <li>• Effects of SWD, TENS and therapeutic soft tissue technique</li> </ul>

<p>coordination exercises.</p> <p>8. Assist to perform techniques for posture correction.</p> <ul style="list-style-type: none"> <li>• Assist to perform techniques of pectoralis stretching</li> <li>• Assist to perform techniques of shoulder exercises</li> <li>• Assist to perform techniques of deep breathing</li> <li>• Assist to perform techniques of maintaining spinal curves.</li> <li>• Assist to perform techniques of spinal muscle strengthening exercises.</li> </ul> <p>9. Assist to perform gait training.</p> <p>10. Suggest SWD, TENS.</p> <p>11. Prescribe therapeutic massage.</p> <p>12. Refer to seniors / higher centre if not improved.</p>		
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Tools / equipments / materials: Paraffin wax bath, electric heating pad/hot pack, hot water, parallel bar, walking aids, weighs, spring, theraband.

**Task: 6** Facilitate rehabilitation of Poliomyelitis

Performance steps	Terminal performance objectives	Related technical knowledge
<ol style="list-style-type: none"> <li>1. Assist to assess the following: <ul style="list-style-type: none"> <li>• muscle tone</li> <li>• muscle power</li> <li>• muscle bulk</li> <li>• range of motion of joints</li> <li>• contractures</li> <li>• deformities</li> <li>• pain</li> <li>• posture</li> </ul> </li> <li>2. Assist to make a plan of rehabilitation according to the features.</li> <li>3. Assist to perform relaxed passive movements</li> <li>4. Assist to perform active / strengthening exercises according to muscle power.</li> <li>5. Advice for splints to prevent joint deformities at knee and ankle.</li> <li>6. Advice orthoses / caliper</li> <li>7. Advice walking aids.</li> <li>8. Suggest for therapeutic massage to improve muscle bulk.</li> <li>9. Suggest for electric stimulation to reeducate action of muscle.</li> <li>10. Refer to seniors / higher centre for the management of complication and deformities.</li> </ol>	<p><b><u>Condition (Given):</u></b> Client.</p> <p><b><u>Task (What):</u></b> Facilitate rehabilitation of Poliomyelitis.</p> <p><b><u>Standards (How well):</u></b></p> <ul style="list-style-type: none"> <li>• Performed 70% of the task.</li> </ul>	<p><b><u>Rehabilitation of Poliomyelitis:</u></b></p> <ul style="list-style-type: none"> <li>• Definition, cause and clinical features</li> <li>• Case assessment</li> <li>• Exercises</li> <li>• Splinting</li> <li>• Orthoses</li> <li>• Gait training</li> <li>• Effects and uses of therapeutic soft tissue technique and electrical stimulation</li> </ul>

Tools / equipments / materials: Splints, caliper, crutch, weigh cuff, springs, wax bath, hot packs.

## **Module: 9: Management of bed ridden**

### **Description:**

It consists of the skills and knowledge related to the management of bed ridden. Each task structure consists of steps, terminal performance objective [TPO], and related technical knowledge concerned with the task.

### **Objectives:**

After its completion the trainees will be able to:

- change position of patient frequently
- prevent contractures
- prevent chest infection
- Assist to maintain for bladder and bowel habit
- Assist to perform conditioning exercises
- monitor / assess hygiene and nutritional status

### **Tasks:**

1. Change position of patient frequently
2. Prevent contractures
3. Prevent chest infection
4. Assist to maintain for bladder and bowel habit
5. Assist to perform conditioning exercises
6. Monitor / assess hygiene and nutritional status

**Task: 1** Change position of patient frequently.

<b>Performance steps</b>	<b>Terminal performance objectives</b>	<b>Related technical knowledge</b>
<ol style="list-style-type: none"> <li>1. Observe existing position</li> <li>2. Review techniques of turning patient to the following different positions in every 2 to 3 hrs: <ul style="list-style-type: none"> <li>• Supine: put one pillow under head one under knees, keep arms slightly flexed.</li> <li>• Side lying: Turn patient one side up, flex knee of raised side and put a pillow under the flexed knee.</li> <li>• Likewise flex elbow of the same side and put it over a pillow.</li> <li>• Oblique from supine: Raise one side about to 45°. Put pillows on back and leg of upper side.</li> </ul> </li> <li>3. Observe and manage skin condition: redness / pressure sores. <ul style="list-style-type: none"> <li>• Use water or air bed or ring to prevent / manage pressure sores.</li> <li>• Apply powder / oils on skin.</li> </ul> </li> </ol>	<p><b><u>Condition (Given):</u></b> Client,</p> <p><b><u>Task(What):</u></b> Change patient in different position.</p> <p><b><u>Standards (How well):</u></b></p> <ul style="list-style-type: none"> <li>• Followed all steps.</li> <li>• Performed the task.</li> </ul>	<p><b><u>Changing position of patient:</u></b></p> <ul style="list-style-type: none"> <li>• Complication of bed ridden.</li> <li>• Prevention and cure of complications</li> <li>• Changing postures</li> <li>• Management of pressure sores</li> </ul>

Tools / equipments / materials: Bed, pillow, Powder, oils.

**Task: 2** Prevent contractures

<b>Performance steps</b>	<b>Terminal performance objectives</b>	<b>Related technical knowledge</b>
<ol style="list-style-type: none"> <li>1. Observe the position of limbs.</li> <li>2. Assist to perform passive movement of all possible joints ten times at a time twice a day.</li> <li>3. Assist to maintain position of limbs in slightly flexed or in extended.</li> <li>4. Put pillows under sole maintaining normal position of feet.</li> <li>5. Keep records.</li> <li>6. Refer to seniors if any complication.</li> </ol>	<p><b><u>Condition (Given):</u></b> Client.</p> <p><b><u>Task (What):</u></b> Maintain posture of a bed ridden patient that prevents contractures.</p> <p><b><u>Standards (How well):</u></b></p> <ul style="list-style-type: none"> <li>• Followed all steps in sequence.</li> </ul>	<p><b><u>Prevention of contractures:</u></b></p> <ul style="list-style-type: none"> <li>• Definition, possible joints for contractures, prevention and correction</li> <li>• Positioning of limbs</li> </ul>

Tools / equipments / materials: Bed, Pillows.

**Task: 3** Prevent chest infections.

<b>Performance steps</b>	<b>Terminal performance objectives</b>	<b>Related technical knowledge</b>
<ol style="list-style-type: none"> <li>1. Examine the chest</li> <li>2. Identify abnormal sounds</li> <li>3. Locate area of abnormal sounds.</li> <li>4. Assist to perform breathing exercises.</li> <li>5. Teach patient coughing and huffing.</li> <li>6. Perform shoulder exercises.</li> <li>7. Suggest incentive spiro meter</li> <li>8. Encourage mobility.</li> </ol>	<p><b><u>Condition (Given):</u></b> Client.</p> <p><b><u>Task (What):</u></b> Perform strengthening exercises for respiratory muscles.</p> <p><b><u>Standards (How well):</u></b></p> <ul style="list-style-type: none"> <li>• Performed the task as required.</li> </ul>	<p><b><u>Prevention of chest infections:</u></b></p> <ul style="list-style-type: none"> <li>• Indication, contraindication and techniques of coughing, huffing and deep breathing.</li> <li>• Exercises for shoulders and chest</li> </ul>

Tools/equipments/materials: Incentive Spiro meter, ballone.

**Task: 4 Assist to maintain for bladder and bowel habit.**

<b>Performance steps</b>	<b>Terminal performance objectives</b>	<b>Related technical knowledge</b>
<ol style="list-style-type: none"> <li>1. Assess patient for bladder and bowel habit.</li> <li>2. Confirm whether the patient has sense of defecation and urination.</li> <li>3. Ask to try to control and release urine and stool actively.</li> <li>4. Assist to perform intermittent clamping of catheter.</li> <li>5. Assist to perform bladder reeducation techniques:               <ul style="list-style-type: none"> <li>• Perform contrast bath</li> <li>• Perform tapping</li> <li>• Perform sound</li> <li>• Perform nerve root stimulation.</li> </ul> </li> <li>6. Assist to perform soft tissue technique on sacrum</li> <li>7. Assist to perform pelvic floor exercises.</li> <li>8. Assist to apply laxatives for constipation.</li> <li>9. Refer to seniors for management of complications or if no improvement.</li> </ol>	<p><b><u>Condition (Given):</u></b> Client</p> <p><b><u>Task (What):</u></b> Perform techniques of maintaining bowel and bladder habit.</p> <p><b><u>Standards (How well):</u></b></p> <ul style="list-style-type: none"> <li>• Performed 70% of the task.</li> </ul>	<p><b><u>Maintaining bladder and bowel habit:</u></b></p> <ul style="list-style-type: none"> <li>• Bowel and bladder control</li> <li>• Bladder and bowel care</li> <li>• Reeducation</li> <li>• soft tissue technique Exercises</li> <li>• Application of laxatives</li> </ul>

Tools/ equipments / materials: hot and cold water, forceps, catheter, bed pan.



**Task: 5** Assist to perform conditioning exercises

<b>Performance steps</b>	<b>Terminal performance objectives</b>	<b>Related technical knowledge</b>
<ol style="list-style-type: none"> <li>1. Assist to perform passive movements.</li> <li>2. Assist to perform breathing exercises.</li> <li>3. Assist to perform hand/finger, ankle/toe movements.</li> <li>4. Assist to perform isometric exercises of all limbs.</li> <li>5. Ask patient to move limbs with his own muscular effort</li> <li>6. Ask to perform bedside exercises on high sitting if indicated.</li> </ol>	<p><b><u>Condition (Given):</u></b> Client.</p> <p><b><u>Task (What):</u></b> Perform conditioning exercises.</p> <p><b><u>Standards (How well):</u></b></p> <ul style="list-style-type: none"> <li>• Followed all steps as required.</li> </ul>	<p><b><u>Conditioning exercises:</u></b></p> <ul style="list-style-type: none"> <li>• Indication, contraindication and types of exercises for a bed bidden patient.</li> </ul>

**Task: 6** Monitor / asses hygiene and nutritional status.

<b>Performance steps</b>	<b>Terminal performance objectives</b>	<b>Related technical knowledge</b>
<ol style="list-style-type: none"> <li>1. Confirm the diagnosis.</li> <li>2. Go through the chart of diet.</li> <li>3. Observe patient's health condition.</li> <li>4. Discuss with seniors or advice for diet management.</li> <li>5. Observe hygiene: <ul style="list-style-type: none"> <li>• Observe patient's personal hygiene</li> <li>• Observe bed and cloths</li> <li>• Observe foods</li> <li>• Observe surrounding area</li> </ul> </li> <li>6. Advice for maintenance of hygiene and nursing care.</li> <li>7. Keep daily records.</li> </ol>	<p><b><u>Condition (Given):</u></b> Client.</p> <p><b><u>Task (What):</u></b> Monitor / assess hygiene and nutritional status.</p> <p><b><u>Standards (How well):</u></b> Performed the task as required.</p>	<p><b><u>Monitoring / assessing hygiene and nutritional status:</u></b></p> <ul style="list-style-type: none"> <li>• Importance of nutrition and diet in human health and for a patient.</li> <li>• Diet management</li> <li>• Hygiene and nursing care</li> </ul>

## **Module: 10: Communication and professionalism development**

### **Description:**

It consists of the skills and knowledge related to the communication and professionalism development in the related occupation. Each task structure consists of steps, terminal performance objective [TPO], and related technical knowledge concerned with the task.

### **Objectives:**

After its completion the trainees will be able:

1. To communicate with clients
2. To communicate with senior physiotherapist
3. To communicate with related specialists
4. To communicate with juniors
5. To communicate with colleagues/peers
6. To communicate with communities
7. To communicate with suppliers
8. To communicate with GOs / NGOs / INGOs
9. To consult related publications
10. To attend related seminar/workshops
11. To maintain professional ethics
12. To maintain team work
13. To attend CME/advance trainings
14. To visit rehabilitation centers
15. To brows www
16. To seek for higher education

### **Tasks:**

1. Communicate with clients
2. Communicate with senior physiotherapist
3. Communicate with related specialists
4. Communicate with juniors.
5. Communicate with colleagues/peers
6. Communicate with communities
7. Communicate with suppliers
8. Communicate with GOs / NGOs / INGOs
9. Consult related publications
10. Attend related seminar / workshops
11. Maintain professional ethics
12. Maintain team work
13. Attend CME / advance trainings
14. Visit rehabilitation centers
15. Brows www
16. Seek for higher education

**Task: 1: Communicate with clients**

<b>Performance steps</b>	<b>Terminal performance objectives</b>	<b>Related technical knowledge</b>
<ol style="list-style-type: none"> <li>1. Receive instruction</li> <li>2. Identify clients</li> <li>3. Identify what to communicate</li> <li>4. Prepare message /information to be communicated</li> <li>5. Communicate message /information to the clients orally</li> <li>6. Communicate message/ information to the clients in written form</li> <li>7. Clarify the message[if necessary]</li> <li>8. Follow precautions</li> <li>9. Keep records</li> </ol>	<p><b><u>Condition (Given):</u></b> Clients and message/information</p> <p><b><u>Task (What):</u></b> Communicate with clients</p> <p><b><u>Standards (How well):</u></b></p> <ul style="list-style-type: none"> <li>• All task steps followed in sequential order</li> <li>• Right message or information communicated to the right client in right time and place in a right way</li> <li>• Techniques/methods of communication well applied</li> </ul>	<p><b>Communicating with clients:</b></p> <ul style="list-style-type: none"> <li>• Concept of communication</li> <li>• Methods / techniques of communication</li> <li>• Identifying clients</li> <li>• Identifying what to communicate</li> <li>• Preparing message /information to be communicated</li> <li>• Communicating message /information to the clients orally</li> <li>• Communicating message/ information to the clients in written form</li> <li>• Clarifying the message[if necessary]</li> <li>• Precautions to be followed</li> <li>• Records keeping</li> </ul>

**Task: 2: Communicate with senior physiotherapist**

Performance steps	Terminal performance objectives	Related technical knowledge
<ol style="list-style-type: none"> <li>1. Receive instruction</li> <li>2. Identify senior physiotherapist</li> <li>3. Identify what to communicate</li> <li>4. Prepare message /information to be communicated</li> <li>5. Communicate message /information to the senior physiotherapist orally</li> <li>6. Communicate message/ information to the senior physiotherapist in written form</li> <li>7. Clarify the message[if necessary]</li> <li>8. Follow precautions</li> <li>9. Keep records</li> </ol>	<p><b><u>Condition (Given):</u></b> senior physiotherapist and massage/information</p> <p><b><u>Task (What):</u></b> Communicate with senior physiotherapist</p> <p><b><u>Standards (How well):</u></b></p> <ul style="list-style-type: none"> <li>• All task steps followed in sequential order</li> <li>• Right message or information communicated to the right senior physiotherapist in right time and place in a right way</li> <li>• Techniques/methods of communication well applied</li> </ul>	<p><b>Communicating with senior physiotherapist:</b></p> <ul style="list-style-type: none"> <li>• Concept of communication</li> <li>• Methods / techniques of communication</li> <li>• Identifying senior physiotherapist</li> <li>• Identifying what to communicate</li> <li>• Preparing message /information to be communicated</li> <li>• Communicating message /information to the senior physiotherapist orally</li> <li>• Communicating message/ information to the senior physiotherapist in written form</li> <li>• Clarifying the message[if necessary]</li> <li>• Precautions to be followed</li> <li>• Records keeping</li> </ul>

**Task: 3: Communicate with related specialists**

Performance steps	Terminal performance objectives	Related technical knowledge
<ol style="list-style-type: none"> <li>1. Receive instruction</li> <li>2. Identify related specialists</li> <li>3. Identify what to communicate</li> <li>4. Prepare message /information to be communicated</li> <li>5. Communicate message /information to the related specialists orally</li> <li>6. Communicate message/ information to the related specialists in written form</li> <li>7. Clarify the message[if necessary]</li> <li>8. Follow precautions</li> <li>9. Keep records</li> </ol>	<p><b><u>Condition (Given):</u></b> related specialists and message/information</p> <p><b><u>Task (What):</u></b> Communicate with related specialists</p> <p><b><u>Standards (How well):</u></b></p> <ul style="list-style-type: none"> <li>• All task steps followed in sequential order</li> <li>• Right message or information communicated to the right related specialists in right time and place in a right way</li> <li>• Techniques/methods of communication well applied</li> </ul>	<p><b>Communicating with related specialists:</b></p> <ul style="list-style-type: none"> <li>• Concept of communication</li> <li>• Methods / techniques of communication</li> <li>• Identifying related specialists</li> <li>• Identifying what to communicate</li> <li>• Preparing message /information to be communicated</li> <li>• Communicating message /information to the related specialists orally</li> <li>• Communicating message/ information to the related specialists t in written form</li> <li>• Clarifying the message[if necessary]</li> <li>• Precautions to be followed</li> <li>• Records keeping</li> </ul>

**Task:** – 4: Communicate with juniors.

Performance steps	Terminal performance objectives	Related technical knowledge
<ol style="list-style-type: none"> <li>1. Receive instruction</li> <li>2. Identify juniors</li> <li>3. Identify what to communicate</li> <li>4. Prepare message /information to be communicated</li> <li>5. Communicate message /information to the juniors orally</li> <li>6. Communicate message/ information to the juniors in written form</li> <li>7. Clarify the message[if necessary]</li> <li>8. Follow precautions</li> <li>9. Keep records</li> </ol>	<p><b><u>Condition (Given):</u></b> Juniors and message/information</p> <p><b><u>Task (What):</u></b> Communicate with juniors</p> <p><b><u>Standards (How well):</u></b></p> <ul style="list-style-type: none"> <li>• All task steps followed in sequential order</li> <li>• Right message or information communicated to the right juniors in right time and place in a right way</li> <li>• Techniques/methods of communication well applied</li> </ul>	<p><b>Communicating with juniors:</b></p> <ul style="list-style-type: none"> <li>• Concept of communication</li> <li>• Methods / techniques of communication</li> <li>• Identifying juniors</li> <li>• Identifying what to communicate</li> <li>• Preparing message /information to be communicated</li> <li>• Communicating message /information to the juniors orally</li> <li>• Communicating message/ information to the juniors in written form</li> <li>• Clarifying the message[if necessary]</li> <li>• Precautions to be followed</li> <li>• Records keeping</li> </ul>

**Task: 5: Communicate with colleagues/peers.**

Performance steps	Terminal performance objectives	Related technical knowledge
<ol style="list-style-type: none"> <li>1. Receive instruction</li> <li>2. Identify colleagues/peers</li> <li>3. Identify what to communicate</li> <li>4. Prepare message /information to be communicated</li> <li>5. Communicate message /information to the colleagues/peers orally</li> <li>6. Communicate message/information to the colleagues/peers in written form</li> <li>7. Clarify the message[if necessary]</li> <li>8. Follow precautions</li> <li>9. Keep records</li> </ol>	<p><b><u>Condition (Given):</u></b> Colleagues/peers and message/information</p> <p><b><u>Task (What):</u></b> Communicate with colleagues/peers</p> <p><b><u>Standards (How well):</u></b></p> <ul style="list-style-type: none"> <li>• All task steps followed in sequential order</li> <li>• Right message or information communicated to the right colleagues/peers in right time and place in a right way</li> <li>• Techniques/methods of communication well applied</li> </ul>	<p><b>Communicating with colleagues/peers:</b></p> <ul style="list-style-type: none"> <li>• Concept of communication</li> <li>• Methods / techniques of communication</li> <li>• Identifying colleagues/peers.</li> <li>• Identifying what to communicate</li> <li>• Preparing message /information to be communicated</li> <li>• Communicating message /information to the colleagues/peers orally</li> <li>• Communicating message/ information to the colleagues/peers in written form</li> <li>• Clarifying the message[if necessary]</li> <li>• Precautions to be followed</li> <li>• Records keeping</li> </ul>

**Task:** 6: Communicate with communities.

Performance steps	Terminal performance objectives	Related technical knowledge
<ol style="list-style-type: none"> <li>1. Receive instruction</li> <li>2. Identify communities</li> <li>3. Identify what to communicate</li> <li>4. Prepare message /information to be communicated</li> <li>5. Communicate message /information to the communities orally</li> <li>6. Communicate message/ information to the communities in written form</li> <li>7. Clarify the message[if necessary]</li> <li>8. Follow precautions</li> <li>9. Keep records</li> </ol>	<p><b><u>Condition (Given):</u></b> Communities and message/information</p> <p><b><u>Task (What):</u></b> Communicate with communities</p> <p><b><u>Standards (How well):</u></b></p> <ul style="list-style-type: none"> <li>• All task steps followed in sequential order</li> <li>• Right message or information communicated to the right communities in right time and place in a right way</li> <li>• Techniques/methods of communication well applied</li> </ul>	<p><b>Communicating with communities:</b></p> <ul style="list-style-type: none"> <li>• Concept of communication</li> <li>• Methods / techniques of communication</li> <li>• Identifying communities.</li> <li>• Identifying what to communicate</li> <li>• Preparing message /information to be communicated</li> <li>• Communicating message /information to the communities orally</li> <li>• Communicating message/ information to the communities in written form</li> <li>• Clarifying the message[if necessary]</li> <li>• Precautions to be followed</li> <li>• Records keeping</li> </ul>



**Task: 7: Communicate with suppliers**

<b>Performance steps</b>	<b>Terminal performance objectives</b>	<b>Related technical knowledge</b>
<ol style="list-style-type: none"> <li>1. Receive instruction</li> <li>2. Identify suppliers</li> <li>3. Identify what to communicate</li> <li>4. Prepare message /information to be communicated</li> <li>5. Communicate message /information to the communities orally</li> <li>6. Communicate message/ information to the suppliers in written form</li> <li>7. Clarify the message[if necessary]</li> <li>8. Follow precautions</li> <li>9. Keep records</li> </ol>	<p><b><u>Condition (Given):</u></b> Suppliers and message/information</p> <p><b><u>Task (What):</u></b> Communicate with suppliers</p> <p><b><u>Standards (How well):</u></b></p> <ul style="list-style-type: none"> <li>• All task steps followed in sequential order</li> <li>• Right message or information communicated to the right suppliers in right time and place in a right way</li> <li>• Techniques/methods of communication well applied</li> </ul>	<p><b>Communicating with suppliers:</b></p> <ul style="list-style-type: none"> <li>• Concept of communication</li> <li>• Methods / techniques of communication</li> <li>• Identifying suppliers.</li> <li>• Identifying what to communicate</li> <li>• Preparing message /information to be communicated</li> <li>• Communicating message /information to the suppliers orally</li> <li>• Communicating message/ information to the suppliers in written form</li> <li>• Clarifying the message[if necessary]</li> <li>• Precautions to be followed</li> <li>• Records keeping</li> </ul>

**Task: 8: Communicate with GOs / NGOs**

Performance steps	Terminal performance objectives	Related technical knowledge
<ol style="list-style-type: none"> <li>1. Receive instruction</li> <li>2. Identify GOs / NGOs</li> <li>3. Identify what to communicate</li> <li>4. Prepare message /information to be communicated</li> <li>5. Communicate message /information to the GOs / NGOs orally</li> <li>6. Communicate message/information to the GOs / NGOs in written form</li> <li>7. Clarify the message[if necessary]</li> <li>8. Follow precautions</li> <li>9. Keep records</li> </ol>	<p><b><u>Condition (Given):</u></b> GOs / NGOs and message/information</p> <p><b><u>Task (What):</u></b> Communicate with GOs / NGOs</p> <p><b><u>Standards (How well):</u></b></p> <ul style="list-style-type: none"> <li>• All task steps followed in sequential order</li> <li>• Right message or information communicated to the right GOs / NGOs in right time and place in a right way</li> <li>• Techniques/methods of communication well applied</li> </ul>	<p><b>Communicating with GOs / NGOs:</b></p> <ul style="list-style-type: none"> <li>• Concept of communication</li> <li>• Methods / techniques of communication</li> <li>• Identifying GOs / NGOs.</li> <li>• Identifying what to communicate</li> <li>• Preparing message /information to be communicated</li> <li>• Communicating message /information to the GOs / NGOs orally</li> <li>• Communicating message/ information to the GOs / NGOs in written form</li> <li>• Clarifying the message[if necessary]</li> <li>• Precautions to be followed</li> <li>• Records keeping</li> </ul>

**Task: 9:** Consult related publications

Performance steps	Terminal performance objectives	Related technical knowledge
<ol style="list-style-type: none"> <li>1. Receive instruction</li> <li>2. Identify related publications</li> <li>3. Enlist related publications</li> <li>4. Obtain related publications</li> <li>5. Read related publications</li> <li>6. Make notes/summaries</li> <li>7. Keep records</li> </ol>	<p><b><u>Condition (Given):</u></b> GOs / NGOs and message/information</p> <p><b><u>Task (What):</u></b> Communicate with GOs / NGOs</p> <p><b><u>Standards (How well):</u></b></p> <ul style="list-style-type: none"> <li>• All task steps followed in sequential order</li> <li>• Right message or information communicated to the right GOs / NGOs in right time and place in a right way</li> </ul>	<p><b>Communicating with GOs / NGOs:</b></p> <ul style="list-style-type: none"> <li>• Definition of professionalism</li> <li>• Identifying related publications</li> <li>• Enlisting related publications</li> <li>• Obtaining related publications</li> <li>• Reading related publications</li> <li>• Making notes/summaries</li> <li>• Keeping records</li> </ul>

**Task: 10:** Attend related seminar / workshops

Performance steps	Terminal performance objectives	Related technical knowledge
<ol style="list-style-type: none"> <li>1. Receive instruction</li> <li>2. Identify seminar / workshops that will add in professional development</li> <li>3. Identify organizations/training institutes / centers that conduct seminar / workshops</li> <li>4. Attend the related seminar / workshops</li> <li>5. identify new technology related to the profession</li> <li>6. Develop competencies that add to one's own professionalism development</li> <li>7. Keep records</li> </ol>	<p><b><u>Condition (Given):</u></b> List of organizations, institutes, training centers conducting seminar and workshops</p> <p><b><u>Task (What):</u></b> Attend related seminar / workshops</p> <p><b><u>Standards (How well):</u></b></p> <ul style="list-style-type: none"> <li>• All task steps followed in sequential order</li> <li>• Right seminar and workshops that add in the professional development identified, selected, and attended in right time and place</li> </ul>	<p><b>Attending related seminar / workshops:</b></p> <ul style="list-style-type: none"> <li>• Definitions, importance, and objectives of seminar and workshops</li> <li>• Identifying seminar / workshops that will add in professional development</li> <li>• Identifying organizations/training institutes / centers that conduct seminar / workshops</li> <li>• Attending the related seminar / workshops</li> <li>• identifying new technology related to the profession</li> <li>• Developing competencies that add to one's own professionalism development</li> <li>• Keeping records</li> </ul>

**Task: 11:** Maintain professional ethics.

<b>Performance steps</b>	<b>Terminal performance objectives</b>	<b>Related technical knowledge</b>
<ol style="list-style-type: none"> <li>1. Receive instruction</li> <li>2. Define professional ethics</li> <li>3. Identify professional ethics</li> <li>4. Enlist professional ethics</li> <li>5. Apply professional ethics</li> <li>6. Maintain professional ethics</li> <li>7. Follow precautions</li> <li>8. Keep records</li> </ol>	<p><b><u>Condition (Given):</u></b> List of organizations, institutes, training centers conducting seminar and workshops</p> <p><b><u>Task (What):</u></b> Maintain professional ethics.</p> <p><b><u>Standards (How well):</u></b></p> <ul style="list-style-type: none"> <li>• All task steps followed in sequential order</li> <li>• Professional ethics maintained in right time , place, and manner</li> </ul>	<p><b>Maintaining professional ethics:</b></p> <ul style="list-style-type: none"> <li>• Definitions, importance, and objectives of professional ethics</li> <li>• Identifying professional ethics</li> <li>• Enlisting professional ethics</li> <li>• Application of the professional ethics</li> <li>• Maintaining professional ethics</li> <li>• Keeping records</li> </ul>

**Task 12:** Maintain Team Work.

<b>Performance steps</b>	<b>Terminal performance objectives</b>	<b>Related technical knowledge</b>
<ol style="list-style-type: none"> <li>1. Receive instruction</li> <li>2. Define team work</li> <li>3. Enlist importance of team work</li> <li>4. Maintain team work</li> </ol>	<p><b><u>Condition (Given):</u></b> Well-equipped class room</p> <p><b><u>Task (What):</u></b> Maintain team work</p> <p><b><u>Standards (How well):</u></b></p> <ul style="list-style-type: none"> <li>• All task steps followed in sequential order</li> <li>• Team work maintained in right time, place and manner</li> </ul>	<p><b>Maintaining team work</b></p> <ul style="list-style-type: none"> <li>• Definitions, importance and objectives of team work</li> <li>• Process of maintaining team work</li> </ul>

**Task 13:** Attend CME / advance trainings

<b>Performance steps</b>	<b>Terminal performance objectives</b>	<b>Related technical knowledge</b>
<ol style="list-style-type: none"> <li>1. Receive instruction</li> <li>2. Identify CME / advance trainings that will add in</li> </ol>	<p><b><u>Condition (Given):</u></b> List of organizations, institutes, training</p>	<p><b>Attending related seminar / workshops:</b></p> <ul style="list-style-type: none"> <li>• Definitions,</li> </ul>

<p>professional development</p> <ol style="list-style-type: none"> <li>3. Identify organizations/training institutes / centers that conduct CME / advance trainings</li> <li>4. Attend the CME / advance trainings</li> <li>5. Identify new technology related to the profession</li> <li>6. Develop competencies that add to one's own professionalism development</li> <li>7. Keep records</li> </ol>	<p>centers conducting CME / advance trainings</p> <p><b><u>Task (What):</u></b> Attend CME / advance trainings</p> <p><b><u>Standards (How well):</u></b></p> <ul style="list-style-type: none"> <li>• All task steps followed in sequential order</li> <li>• Right CME / advance trainings that add in the professional development identified, selected, and attended in right time and place</li> </ul>	<p>importance, and objectives of CME / advance trainings</p> <ul style="list-style-type: none"> <li>• Identifying CME / advance trainings that will add in professional development</li> <li>• Identifying organizations/training institutes / centers that conduct CME / advance trainings ps</li> <li>• Attending the CME / advance trainings</li> <li>• identifying new technology related to the profession</li> <li>• Developing competencies that add to one's own professionalism development</li> <li>• Keeping records</li> </ul>
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**Task 14: Visit rehabilitation centers**

Performance steps	Terminal performance objectives	Related technical knowledge
<ol style="list-style-type: none"> <li>1. Receive instruction</li> <li>2. Define rehabilitation</li> <li>3. Define rehabilitation centers</li> <li>4. Enlist objectives / functions of rehabilitation centers</li> <li>5. Identify/ select a well equipped/managed rehabilitation center</li> <li>6. Make a plan to visit rehabilitation center(s)</li> <li>7. Visit rehabilitation centers</li> <li>8. Observe various activities being conducted in the rehabilitation center</li> <li>9. Prepare observation report of the visit</li> <li>10. Submit the report</li> <li>11. Follow precautions</li> <li>12. Keep records</li> </ol>	<p><b><u>Condition (Given):</u></b> List of organizations, institutes, training centers conducting CME / advance trainings</p> <p><b><u>Task (What):</u></b> Attend CME / advance trainings</p> <p><b><u>Standards (How well):</u></b></p> <ul style="list-style-type: none"> <li>• All task steps followed in sequential order</li> <li>• Right CME / advance trainings that add in the professional development identified, selected, and attended in right time and place</li> </ul>	<p><b>Attending related seminar / workshops:</b></p> <ul style="list-style-type: none"> <li>• Definition, importance, and objectives of visiting rehabilitation centers</li> <li>• Identifying , and selecting rehabilitation centers to be visited that will add in professional development</li> <li>• Plan of visit</li> <li>• Preparation of observation report</li> <li>• Precautions to be followed</li> <li>• Keeping records</li> </ul>

**Task 15: Browses www**

Performance steps	Terminal performance objectives	Related technical knowledge
<ol style="list-style-type: none"> <li>1. Receive instruction</li> <li>2. Develop concept of browsing</li> <li>3. Develop skills for browsing</li> <li>4. Practice browsing www</li> <li>5. Follow precautions</li> <li>6. Follow ethics</li> <li>7. Keep records</li> </ol>	<p><b><u>Condition (Given):</u></b> Computer with internet facilities</p> <p><b><u>Task (What):</u></b> Browses www</p> <p><b><u>Standards (How well):</u></b></p> <ul style="list-style-type: none"> <li>• All task steps followed in sequential order</li> <li>• Browsing www done in a professional way</li> </ul>	<p><b>Browsing www:</b></p> <ul style="list-style-type: none"> <li>• Definition, importance, and objectives of browsing www</li> <li>• What, when, and how of browsing www</li> <li>• Precautions to be followed</li> <li>• Ethics</li> <li>• Keeping records</li> </ul>

**Task 16:** Seek for higher education.

Performance steps	Terminal performance objectives	Related technical knowledge
<ol style="list-style-type: none"> <li>1. Receive instruction</li> <li>2. Make a plan for getting higher education</li> <li>3. Identify institutes for higher education</li> <li>4. Manage finance for getting higher education</li> <li>5. Enroll for higher education</li> <li>6. Follow precautions</li> <li>7. Follow ethics</li> <li>8. Keep records</li> </ol>	<p><b><u>Condition (Given):</u></b> Computer with internet facilities</p> <p><b><u>Task (What):</u></b> Seek for higher education.</p> <p><b><u>Standards (How well):</u></b></p> <ul style="list-style-type: none"> <li>• All task steps followed in sequential order</li> <li>• Identified enrollment procedure for higher education</li> </ul>	<p>Seeking for higher education:</p> <ul style="list-style-type: none"> <li>• Planning for higher education</li> <li>• Managing finance for higher education</li> <li>• Enrollment procedure for higher education</li> <li>• Keeping records</li> </ul>



**Reading materials:**

- Human anatomy – B.D.Chaurashia
- Anatomy and physiology for physiotherapist -Inder Bir Singh
- Text book of massage- Margaret Hollis
- Therapeutic exercises- Corolyn Kisner and Lynn Allen Colby
- Text book of orthopedics-Cash
- Text book of neurology-Cash
- Instructor selected related reading materials available in the local market.
- Instructor prepared hand outs, notes, manuals, and other reading materials.

## Module 11: Entrepreneurship Development

**Total: 40 hrs**  
**Theory: 18 hrs**  
**Practical: 22 hrs**

### Course description

This course is designed to impart the knowledge and skills necessary for micro enterprise or a business unit of self-employment startup. The entire course intends to introduce enterprise, finding suitable business ideas and developing business idea to formulation of business plan.

### Course objectives

After completion of this course, students will be able to:

1. Understand concept of enterprise and self-employment
2. Explore suitable business idea matching to self
3. Learn to prepare business plan
4. Learn to keep preliminary business record

S.N.	Task statements	Related technical knowledge	Time (hrs)		
			T	P	Tot.
1.	State the concept of business/enterprises	<ul style="list-style-type: none"> <li>• Introduction to business/enterprise</li> <li>• Classification of business/enterprises</li> <li>• Overview of MSMEs(Micro, Small and Medium Enterprises) in Nepal</li> <li>• Cost &amp; Benefits of self-employment/salaried job</li> </ul>	4		4
2.	Grow entrepreneurial attitudes	<ul style="list-style-type: none"> <li>• Wheel of success</li> <li>• Risk taking attitude</li> </ul>	3		3
3.	Generate viable business ideas	<ul style="list-style-type: none"> <li>• Business idea generation</li> <li>• Evaluation of business ideas</li> </ul>	1	2	3
4.	Prepare business plan	<ul style="list-style-type: none"> <li>• Concept of market and marketing</li> <li>• Description of product or service</li> <li>• Selection of business location</li> <li>• Estimation of market share</li> <li>• Promotional measures</li> <li>• Required fixed assets and cost</li> <li>• Required raw materials and costs</li> <li>• Operation process flow</li> <li>• Required human resource and cost</li> <li>• Office overhead and utilities</li> <li>• Working capital estimation and calculation of total finance required</li> <li>• Product costing and pricing</li> <li>• Cost benefit analysis (BEP, ROI)</li> </ul>	9	18	27

S.N.	Task statements	Related technical knowledge	Time (hrs)		
			T	P	Tot.
		<ul style="list-style-type: none"> <li>Information collection method and guidelines</li> <li>Individual business plan preparation and presentation</li> </ul>			
5.	Prepare basic business records	<ul style="list-style-type: none"> <li>Day book</li> <li>Payable &amp; receivable account</li> </ul>	1	2	3
<b>Total:</b>			<b>18</b>	<b>22</b>	<b>40</b>

**Textbook:**

क) प्रशिक्षकहरूका लागि निर्मित निर्देशिका तथा प्रशिक्षण सामग्री, प्राविधिक शिक्षा तथा व्यावसायिक तालीम परिषद्, २०६९

**Reference book:**

*Entrepreneur's Handbook, Technonet Asia, 1981*