



BACHELOR OF PHYSIOTHERAPY

Era University, Lucknow

Course Outline: 2024-2025

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| Name of the Program | Bachelor of Physiotherapy | | | Year/Semester: | IV year/VIII sem |
| Course Name | PT in Cardiothoracic Conditions | Course Code: | BPT- 801/ BPP801 | Type: 8th Sem | Theory & Practical |
| Credits | 05 | | | Total Sessions Hours: | 60 Hours |
| Evaluation Spread | Internal Continuous Assessment: | | 30 Marks | End Term Exam: | 70Marks |
| Type of Course | Compulsory | | ✓ Core | Creative | Life Skill |
| Course Objectives | <ul style="list-style-type: none"> The objective of this course is to help the student in understanding & integrating the knowledge in clinical cardio respiratory conditions Use physiotherapeutic measures as preventive / restorative Rehabilitative purposes for pulmonary / cardiac patients. Identify cardio-respiratory dysfunction, set treatment goals and apply their skills to the patients | | | | |
| Course Outcomes(CO): <i>After the successful course completion ,learners will develop following attributes:</i> | | | | | |
| CO1 | Safely and effectively execute and interpret cardio respiratory assessment technique | | | | |
| CO2 | Develops the skills to execute different physiotherapy techniques used in treatment of cardio respiratory dysfunction | | | | |
| CO3 | Able to execute effective physiotherapeutic measures with appropriate clinical reasoning to improve pulmonary functions after lung surgries | | | | |
| CO4 | To select strategies for cure, care & prevention; adopt restorative & rehabilitative measures for maximum possible functional independence of a patient at intensive care unit. | | | | |
| CO5 | To design and execute effective tailored cardiopulmonary rehabilitation program | | | | |
| Pedagogy | Interactive, discussion-based, student-centered, presentation. | | | | |
| Internal Evaluation Mode | Mid-term Examination: 30 Marks Class test: 12 Marks Class participation or any other : 04 Marks Assignments/Project: 04 Marks Attendance: 04 Marks Class Presentation: 04 Bed Side behavior or Interaction in Class: 02 | | | | |
| Session Details | Topic | | | Hours | Mapped CO |
| Unit1 | Investigations and tests for cardiac diseases Anatomical and Physiological differences between the Adult and Pediatric lung, Bedside assessment of the patient-Adult & Pediatric. Investigations and tests – Exercise tolerance Testing – Cardiac & Pulmonary, Radiography, PFT, ABG, ECG, Hematological and Biochemical Tests | | | 10 | CO1 |

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| | <p>Physiotherapy techniques to increase lung volume – controlled mobilization, Positioning, breathing exercises, Neurophysiologic Facilitation of Respiration, Mechanical aids - Incentive Spirometry, CPAP, IPPB, Physiotherapy techniques to decrease the work of breathing – Measures to optimize the balance between energy supply and demand, positioning, Breathing re-education – Breathing control techniques, mechanical aids – IPPB, CPAP, BiPAP.</p> | | |
| Unit2 | <p>Physiotherapy techniques to clear secretions and Lung conditions Physiotherapy techniques to clear secretions – Hydration, Humidification & Nebulisation, Mobilization and Breathing exercises, Postural Drainage, Manual techniques – Percussion, Vibration and Shaking, Rib Springing, ACBT, Autogenic Drainage, Mechanical Aids – PEP, Flutter, IPPB, Facilitation of Cough and Huff, Nasopharyngeal Suctioning -Drug therapy – Drugs to prevent and treat inflammation, Bronchospasm, Breathlessness, Sputum clearance, inhibit coughing, improve ventilation, pulmonary hypertension, Inhaled Nebulizers.</p> | 8 | CO2 |
| Unit3 | <p>Lung conditions - Physiotherapy in Obstructive lung conditions Physiotherapy in Restrictive lung conditions. Management of breathlessness. Pulmonary Rehabilitation. Physiotherapy following Lung surgeries</p> | 7 | CO3 |
| Unit4 | <p>Physiotherapy in the ICU Respiratory failure – Oxygen Therapy and Mechanical Ventilation. Introduction to ICU: ICU monitoring –Apparatus, Airways and Tubes used in the ICU. Common conditions in the ICU – Tetanus, Head Injury, Lung Disease, Pulmonary Edema, Multiple Organ Failure, Neuromuscular Disease, Smoke Inhalation, Poisoning, Aspiration, Near Drowning, ARDS, Shock; Dealing with an Emergency Situation in the ICU.</p> | 8 | CO4 |
| Unit5 | <p>Cardiac surgeries -Physiotherapy management following cardiac surgeries. - Cardiac Rehabilitation. Peripheral Vascular Disease- Physiotherapy management following Peripheral Vascular Disease (PVD). Abdominal Surgeries - Management of Pulmonary Restorative Dysfunction following surgical procedures on Abdomen and Thorax. Home program and education of family members in patient care</p> | 7 | CO5 |

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| Practical | Evaluation and assessment methods for cardiothoracic region. Practical based on exercise tolerance testing, Breathing exercises , Practical based on facilitation of respiration., Breathing control techniques, Chest Mobilization and Postural Drainage, Manual techniques – Percussion, Vibration and Shaking, Rib Springing, ACBT, Autogenic Drainage, Mechanical Aids – PEP, Flutter, CPR, Assessment and management of PVD, Pulmonary rehabilitation, Cardiac rehabilitation | 20 hours |
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CO-PO and PSO Mapping

| CO | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 | PSO4 | PSO5 | PSO6 |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|
| CO1 | 3 | 1 | 1 | 2 | - | 1 | 2 | - | - | - | - | - | - | - |
| CO2 | 3 | 3 | 3 | 2 | 3 | 3 | 2 | 1 | - | - | - | - | - | - |
| CO3 | 3 | 3 | 3 | 2 | 1 | 3 | 3 | 2 | - | - | - | - | - | - |
| CO4 | 3 | 3 | 3 | 2 | 2 | 3 | 1 | 1 | - | - | - | - | - | - |
| CO5 | 3 | 3 | 3 | 2 | 1 | 3 | 3 | 2 | - | - | - | - | - | - |

Strongcontribution-3, Averagecontribution-2, Lowcontribution-1,

Suggested Readings:

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| Reference Books | 1. Tidy's physiotherapy. 2. Cash's Text Book of Chest, Heart, Vascular Disorders for Physiotherapists. 3. Physical Rehabilitation Assessment and Treatment – O'Sullivan Schmitz 4. Cash's Text book of General Medicine and Surgical conditions for Physiotherapists |
| Para Text | <ol style="list-style-type: none"> https://youtu.be/XvorhwGZGm8?si=rn0ZcOQzJLhK0MLx https://youtu.be/_n0nuy8VWml?si=wN8N5LxHkvA4dn7C https://youtu.be/tRzuJfxsZm0?si=AV_YyHtV3axs4Qnl https://youtu.be/Q9JIZI3VGQ0?si=w8OO_Ho4rs03qT06 https://youtu.be/Rx2ADUgH_iw?si=549ZPROkAe_dYDGv |

Recapitulation & Examination Pattern

Internal Continuous Assessment:

| Component | Marks | Pattern |
|---|-----------|---|
| Class test | 12 | Contains 01 long question. question carries 04 Marks. 02 Short questions. Each question carries 02 Marks 04 multiple choice questions. Each question carries 01 Marks |
| Class participation or any other | 04 | This to be made on activities and instruction given by subject teacher. |
| Marks Assignments/Project: | 04 | Assignment to be made on topics and instruction given by subject teacher |
| Class Presentation: | 04 | This to be made on topics and instruction given by subject teacher |
| Bed Side behavior or Interaction in Class | 02 | This to be made on activities and instruction given by subject teacher. |
| Attendance | 04 | As per policy |
| Total Marks | 30 | |

BACHELOR OF PHYSIOTHERAPY

Era University, Lucknow

Course Outline: 2024-2025

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|--|---|---------------------------------------|--------------------------------|----------------------------------|-------------------------------|
| Name of the Program | BPT | | | Year/Semester: | IV year/VIII sem |
| Course Name | Physiotherapy in Orthopedics Conditions | Course Code: | BPT 802/ BPP 802 | Type: | Theory & Practical |
| Credits | 05 | | | Total Sessions Hours: | 60 Hours |
| Evaluation Spread | Internal Continuous Assessment: | 30 Marks | | End Term Exam: | 70 Marks |
| Type of Course | <input type="radio"/> Compulsory | <input checked="" type="radio"/> Core | <input type="radio"/> Creative | <input type="radio"/> Life Skill | |
| Course Objectives | <ol style="list-style-type: none"> 1. Perform comprehensive PT assessments for orthopedic conditions. 2. Implement effective PT management strategies and home programs. 3. Equip students with the skills to assess and manage congenital and acquired deformities. 4. Prepare students for effective PT management post-surgical interventions and orthopedic surgeries. 5. Equip students with the skills to manage conservative and post-operative PT care for upper extremity conditions, including shoulder, elbow, wrist, and hand. 6. Prepare students to handle post-operative rehabilitation and conservative management for lower extremity conditions, particularly hip, knee, ankle, and foot. | | | | |
| Course Outcomes (CO) : <i>After the successful course completion, learners will develop following attributes:</i> | | | | | |
| Course Outcome(CO) | Attributes | | | | |
| CO1 | . Accurate assessment and documentation of orthopedic conditions. | | | | |
| CO2 | Improved patient outcomes through individualized management plans. | | | | |
| CO3 | Students will effectively assess and manage deformities, ensuring optimal patient care. | | | | |
| CO4 | Students will demonstrate competence in post-surgical PT care and management of orthopedic surgeries. | | | | |
| CO5 | Students will competently manage conservative and post-operative PT for shoulder, elbow, wrist, and hand conditions, ensuring effective rehabilitation. | | | | |
| CO6 | Students will effectively manage post-operative and conservative PT care for hip, knee, ankle, and foot conditions, promoting optimal recovery. | | | | |
| Pedagogy | Interactive, discussion-bases, student-centered , presentation. | | | | |

| Internal Evaluation Mode | Mid-term Examination: 30 Marks Class test: 12 Marks Class participation or any other : 04 Marks Assignments/Project: 04 Marks Attendance: 04 Marks Class Presentation: 04 Marks Bed Side behavior or Interaction in Class: 02 Marks | | |
|---|--|--------------|------------------|
| Session Details | Topic | Hours | Mapped CO |
| UNIT I PT in Specific fractures and dislocations | <ul style="list-style-type: none"> • PT assessment for orthopedic conditions Subjective assessment, Objective assessment, on observation, on palpation, on examination – Prescription of home program. Documentation of case records, and follows up. • Fractures Aims and Principles of PT management in fracture cases - short and long term goals. - Guidelines for fracture treatment • Specific fractures and dislocations: PT assessment and management of upper limb fractures and dislocations. PT assessment and management of lower limb fractures and dislocations including pelvis. PT assessment and management spinal fractures. • Principles of various schools of thought in manual therapy – Maitland, Mackenzie, Mulligan. • Degenerative and inflammatory conditions: Describe the PT, assessment and management and home program for the following conditions – Osteoarthritis - emphasis mainly on knee, hip and hand, Rheumatoid Arthritis, Ankylosing spondylitis, Gout, Perthes disease, Periarthritic shoulder. • Infective conditions: Describe PT assessment and management for following conditions – Osteomyelitis – acute and chronic, Septic arthritis, Pyogenic arthritis, TB spine and major joints - knee and hip. Define; review the postural abnormalities of spinal column, clinical features, deformities, medical and surgical management. Describe PT assessment and management and home program. • Practical | 20 | CO1 & CO2 |
| UNIT II PT management in Deformities and Amputations | <ul style="list-style-type: none"> • Deformities: Describe the PT, assessment and management of the following conditions : Congenital : CTEV, CDH, Torticollis, pesplanus, pescavus and other common deformities. Acquired: scoliosis, kyphosis, coxavera, genu varum, valgum and recurvatum. • Poliomyelitis: PT. assessment and management after surgical corrections and reconstructive surgeries – emphasis on tendon transfer and | 20 | CO 3& CO4 |

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| | <p>home program.</p> <ul style="list-style-type: none"> • Amputations: PT assessment, aims, management pre and post operatively. PT management with emphasis on stump care and bandaging. Pre and post prosthetic training, checking out prosthesis, Complications of amputations and its management. • Spinal conditions: PT assessment, aims, and management and home program of the following conditions: Cervical spondylosis, Lumbar spondylosis, spondylolisthesis, Spinal canal stenosis, Spondylolysis, Sacro-iliac joint dysfunction, Sacralisation, Lumbarisation, Intervertebral Disc prolapse, Coccydynia, Spina bifida occulta. • Osteoporosis: Causes, predisposing factors, investigations and treatment. • Orthopedic surgeries: Pre and post operative PT assessment, goals, precautions and PT management of following surgeries such as: Arthrodesis, Osteotomy, Arthroplasty-partial and total- Excision arthroplasty, excision arthroplasty with implant, interpositional arthroplasty and total replacement; Tendon transplant, Soft tissue release- tenotomy, myotomy, lengthening; Arthroscopy, Spinal stabilization, Reattachment of limbs, External fixators, Synovectomy. • Practical | | |
| <p>UNIT III Orthopedic surgeries and their PT management</p> | <ul style="list-style-type: none"> • Shoulder joint: Shoulder instabilities, TOS, RSD, Impingement syndrome – conservative and Post operative PT management. Total shoulder replacement and Hemi replacement. - Post operative PT management. AC joint injuries - rehabilitation. Rotator cuff tears- conservative and surgical repair. Subacromial decompression - Post Operative PT management. • Elbow and forearm Excision of radial head - Post operative PT management. Total elbow arthroplasty- Post operative PT management. • Wrist and Hand: Total wrist arthroplasty. Repair of ruptured extensor tendons. Carpal tunnel syndrome. Flexor and extensor tendon lacerations - Post operative PT management. • Hip Joint surgeries - hemi and total hip replacement - Post operative PT management Tendonitis and bursitis. - Management. | <p>20</p> | <p>CO5 & CO6</p> |

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| | <ul style="list-style-type: none"> • Knee Lateral retinacular release, chondroplasty- Post operative management. Realignment of extensor mechanism. ACL and PCL reconstruction surgeries - Post operative rehabilitation. Meniscectomy and meniscal repair - Post operative management. Plica syndrome, patellar dysfunction and Hoffa's syndrome - conservative management. TKR- rehabilitation protocol. Patellar tendon ruptures and Patellectomy- rehabilitation. • Ankle and foot: Ankle instability. Ligamentous tears- Post operative management. Practical • Practical 1. Practical demonstration of basic principles of physiotherapy assessment, functional assessment and application of physiotherapy in orthopaedics conditions. 2. Student must maintain a logbook. The duly completed logbook should be submitted during practical examination. | | | |
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| CO-PO Mapping | | | | | | | | | | |
|---|--|---------|--------------------------------|-----|-----|----------------------------|-----|-----|-----|------|
| CO | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 |
| CO1 | 3 | 3 | 3 | 3 | 1 | 3 | 2 | - | - | 1 |
| CO2 | 2 | 2 | 3 | 2 | 1 | 1 | 1 | - | - | 1 |
| CO3 | 3 | 3 | 3 | 3 | 1 | 3 | 2 | - | - | 1 |
| CO4 | 1 | 2 | 3 | 2 | 1 | 3 | 2 | - | - | 1 |
| CO5 | 3 | 3 | 3 | 3 | 1 | 3 | 2 | - | - | 1 |
| CO6 | 3 | 3 | 3 | 3 | 1 | 3 | 2 | - | - | 1 |
| <i>Strong contribution-3,</i> | | | <i>Average contribution-2,</i> | | | <i>Low contribution-1,</i> | | | | |
| Suggested Readings: | | | | | | | | | | |
| Text-Books | <ol style="list-style-type: none"> 1. Essential Orthopaedics: Maheshwari 2. Textbook of Orthopaedics: Kotwal and Natrajan 3. Apley System of orthopedics and Fracture | | | | | | | | | |
| Reference Books | <ol style="list-style-type: none"> 1. Essential Clinical Orthopaedics by John Ebenezer 2. Outline of fracture: Adams | | | | | | | | | |
| ParaText | <ol style="list-style-type: none"> 1. https://youtu.be/rM2qWxqLZMc 2. https://youtu.be/l9yGc73lrss 3. https://youtu.be/pnKaBMvVUs0 4. https://youtu.be/A6j1VW2JE9M 5. https://youtu.be/DWP4GmVGpeA | | | | | | | | | |
| Recapitulation & Examination Pattern | | | | | | | | | | |
| Internal Continuous Assessment: | | | | | | | | | | |
| Component | Marks | Pattern | | | | | | | | |

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|---|-----------|--|
| Class test | 12 | Contains 01 long queation. question carries 04 marks 02 short questions. each question carries 02 marks 04 multiple choice questions. each question carries 01 marks |
| Class participation or any other | 04 | This to be made on activities and instruction given by subject teacher |
| Marks assignments/project | 04 | Assignment to be made on topics and instruction given by subject teacher |
| Class presentation | 04 | This to be made on topics and instruction given by subject teacher |
| Bed side behavior or interaction in class | 02 | This is to be made on activities and instruction given by subject teacher |
| attendance | 04 | As per policy |
| Total marks | 30 | |



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Era University, Lucknow
Course Outline: 2024-2025

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|--|---|---------------------|--------------------------|------------------------------|-------------------------------|
| Name of the Program | Bachelor of Physiotherapy | | | Year/Semester: | IV year/VIII sem |
| Course Name | Physiotherapy in Obstetrics & Gynecology | Course Code: | BPT- 803/ BPP 803 | Type: | Theory & Practical |
| Credits | 05 | | | Total Sessions Hours: | 60 Hours |
| Evaluation Spread | Internal Continuous Assessment: | | 30 Marks | End Term Exam: | 70Marks |
| Type of Course | Compulsory | ✓ Core | | Creative | Life Skill |
| Course Objectives | The objective of this course is that the students will be able to demonstrate an understanding of various obstetrics & gynecological conditions. | | | | |
| Course Outcomes(CO): <i>After the successful course completion ,learners will develop following attributes:</i> | | | | | |
| CO1 | <ul style="list-style-type: none"> To understand about general anatomy, physiology and various conditions in obstetrics and gynecological conditions relevant to physiotherapy Advice and Demonstrate types of exercises during antenatal and postnatal period Demonstrate exercises after C- section Will be able to manage pregnancy induced low back pain and pelvic dysfunction | | | | |
| CO2 | <ul style="list-style-type: none"> Provide physiotherapy management in uro genital and ano rectal dysfunction. Provide physiotherapy management after various gynecological surgeries | | | | |
| CO3 | <ul style="list-style-type: none"> Provide physiotherapy management in pelvic inflammatory disease and lymph edema Provide physiotherapy management after surgery of neoplasm of female reproductive organ | | | | |
| Pedagogy | Interactive, discussion-based, student-centered, presentation. | | | | |
| Internal Evaluation Mode | Mid-term Examination: 30 Marks Class test: 12 Marks Class participation or any other : 04 Marks Assignments/Project: 04 Marks Attendance: 04 Marks Class Presentation: 04 Bed Side behavior or Interaction in Class: 02 | | | | |
| Session Details | Topic | | | Hours | MappedCO |
| Unit1 | Exercises and pregnancy - Physiotherapy in the childbearing year- management of spinal and pelvic pain and dysfunction. - Exercises and pregnancy- advice, types of exercises- general categories, aqua natal classes, antenatal classes, postnatal physiotherapy. | | | 14 | CO1 |

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| | -PT management in Labor – like in caesarean section | | |
| Unit2 | PT in Uro-genital dysfunction and gynecological surgery PT in Uro-genital dysfunction i) Uterine prolapse-classification & management (Conservative /Surgical) ii) Cystocoele, Rectocoele, Enterocoele PT in management in anorectal dysfunctions- like in faecal incontinence, constipation. PT management in gynecological surgery | 14 | CO2 |
| Unit3 | PT management in Pelvic Inflammatory Diseases PT management in Pelvic Inflammatory Diseases with special emphasis to backache due to Gynae / Obs conditions. PT management in Lymphoedema. PT and surgical management in Neoplasm of Female reproductive organs. | 12 | CO3 |
| Practical | Antenatal assessment and screening, Antenatal exercises, Post natal exercises, Pelvic floor strengthening exercises, Physiotherapy techniques to manage spinal and pelvic pain/ dysfunction, exercise after C- section, manual lymphatic drainage, intermittent, pneumatic compression therapy | 20 hours | |

CO-POandPSOMapping

| CO | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 | PSO4 | PSO5 | PSO6 |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|
| CO1 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | - | - | - | - | - | - | - |
| CO2 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | - | - | - | - | - | - | - |
| CO3 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | - | - | - | - | - | - | - |

Strongcontribution-3, Averagecontribution-2, Lowcontribution-1,

SuggestedReadings:

| | |
|-----------------------|---|
| ReferenceBooks | <ol style="list-style-type: none"> 1. Therapeutic Exercise by Carolyn Kisner 2. Physiotherapy in Gynaecological & Obstetrical Conditions-Polden 3. Dutta, Text book of Gynecology, New Central Book Agency 4. Essential of Obstetrics and Gynecology, Hacker Moore Gambone. 5. Sapsford, R., Bullock-Saxton, J., & Markwell, S. (1998). Women's health: A textbook for physiotherapists. London: WB Saunders |
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| ParaText | <ol style="list-style-type: none"> 1. https://youtu.be/aCx0Pgb8X0Q?si=6emLq9IEPz2VIXp8 2. https://youtu.be/8sj-qQ3vJy4?si=LL_sEUUviYL0RRS8 3. https://youtu.be/Ln-cUvQ-eNI?si=AyFaDEHXLL-LbS9g 4. https://youtu.be/LePMCq7qGP4?si=uDbCHRdb8J_NnQ4K |
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Recapitulation&ExaminationPattern

InternalContinuousAssessment:

| Component | Marks | Pattern |
|---|-----------|--|
| Class test | 12 | Contains 01 long question. question carries 04Marks. 02 Short questions. Each question carries 02Marks 04 multiple choice questions. Each question carries 01Marks |
| Class participation or any other | 04 | This to be made on activities and instruction given by subject teacher. |
| Marks Assignments/Project: | 04 | Assignment to be made on topics and instruction given by subject teacher |
| Class Presentation: | 04 | This to be made on topics and instruction given by subject teacher |
| Bed Side behavior or Interaction in Class | 02 | This to be made on activities and instruction given by subject teacher. |
| Attendance | 04 | As per policy |
| Total Marks | 30 | |

| | | | | | |
|--|--|---------------------|-------------------------|---------------------------------|-------------------------------|
| Name of the Program | Bachelor of Physiotherapy | | | Year/Semester: | IV year/VIII sem. |
| Course Name | Physiotherapy in Neurology & Neurosurgery | Course Code: | BPT 804/ BPP 804 | Type: 8th Sem | Theory & Practical |
| Credits | 05 | | | Total Sessions Hours: | 60 Hours |
| Evaluation Spread | Internal Continuous Assessment: | 30 Marks | End Term Exam: | 70 Marks | |
| Type of Course | Compulsory | ✓ Core | Creative | Life Skill | |
| Course Objectives | <ol style="list-style-type: none"> 1. The objective of this course focuses on equipping students with the knowledge and skills necessary to assess, diagnose and treat patients with neurological and neurosurgical conditions. 2. The students will develop an in depth knowledge of various neurological disorders and its physiotherapy management. 3. The students will learn to perform comprehensive neurological assessments, including physical examination techniques and the use of standardized assessment tools to identify impairments, activity limitations and participation restrictions. 4. Students will develop evidence-based treatment plans that address the specific needs of patients with neurological conditions. 5. The students will master various physiotherapeutic interventions and therapeutic modalities for sensory-motor recovery. 6. The students will understand the importance of patient education, including training patients and their families in home exercise programs, safety measures, lifestyle modifications, and the use of assistive devices to improve functional independence. | | | | |
| Course Outcomes(CO): <i>After the successful course completion ,learners will develop following attributes:</i> | | | | | |
| CO1 | To understand about basic concepts of neuroanatomical and neurophysiology, physiotherapy assessment and evaluation of neurological patient, basic principles of physiotherapy approaches | | | | |
| CO2 | Students should be able to understand the Anatomy & Physiology of spinal cord and its injury types with physiotherapy assessment & management | | | | |
| CO3 | Students should be able to understand the assessment, principles, classification and physiotherapy management of stroke, MND, CP and peripheral nerve injuries | | | | |
| CO4 | Students should be able to understand the concept, classification and physiotherapy management of traumatic brain injury and common neurosurgery & its physiotherapy | | | | |
| Pedagogy | Interactive, discussion-based, student-centered, presentation. | | | | |
| Internal Evaluation Mode | Mid-term Examination: 30 Marks Class test: 12 Marks Class participation or any other : 04 Marks Assignments/Project: 04 Marks Attendance: 04 Marks Class Presentation: 04 Bed Side behavior or Interaction in Class: 02 | | | | |

| Session Details | Topic | Hours | MappedCO |
|-----------------|--|-------|-----------|
| Unit 1 | <p>UNIT I Physiotherapy evaluation of a neurological patient</p> <p>Review of Basic Neuro - Anatomy and Physiology Physiotherapy evaluation of a neurological patient, electro diagnostic procedures, interpretations and prognosis in different neurological conditions, Upper and Lower motor neuron lesions.</p> <p>Principles of physiotherapy programs, reeducation and retraining techniques in neurological conditions, approaches like: Bobath's / neuro developmental therapy, Rood's approach, PNF, Vojta techniques, biofeedback, Brunnstorm movement therapy, Motor Relearning programming, sensory integration therapy.</p> <p>Spinal cord injury: review of anatomy and physiology, Physiotherapy Assessment of Spinal cord injury, Principles of Physiotherapy at various stages of Spinal cord injury Rehabilitation goals and ADL training</p> | 15 | CO1 & CO2 |
| Unit 2 | <p>PT Management for Stroke MND and CP</p> <p>Assessment and principles of therapeutic management of following neurological conditions:</p> <ul style="list-style-type: none"> • Stroke, meningitis, encephalitis, Parkinson's disease, Cerebral palsy, cerebellar Lesions, Brain tumors, Multiple Sclerosis, facial palsy. • Motor neuron disease, disseminated sclerosis, transverse myelitis, polio, syringomyelia, spina bifida. • Neuropathies, neuromuscular junction disorders and myopathies <p>Peripheral nerve injuries, surgical resection & repair:</p> <ul style="list-style-type: none"> • Classification & types • Functional assessment, investigation, diagnosis & prognosis • Physiotherapeutic management • Poly neuropathy | 15 | CO3 |
| Unit 3 | <p>PT Management in Traumatic Brain Injury</p> <p>Disturbance of speech and aphasia</p> <p>Traumatic brain injury:</p> <ul style="list-style-type: none"> • Types and Mechanisms of head injury • Clinical features, potential complications • Physiotherapy principles of immediate and postoperative therapeutic management <p>Neurosurgery: Post surgical Physical therapy in neurosurgical procedures – craniotomy, shunts, SOL resection, surgical treatment of spasticity, cervical cord decompression.</p> | 10 | CO4 |

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| Practical | <ol style="list-style-type: none"> 1. Practical demonstration of basic principles of physiotherapy assessment, functional assessment and application of physiotherapy in neurology conditions. 2. Practical based on reeducation and retraining techniques in neurological conditions, approaches like: Bobath's / neuro developmental therapy, Rood's approach, PNF, Vojta techniques, biofeedback, Brunnstorm movement therapy, Motor Relearning programming, sensory integration therapy 3. Practical based on spinal cord injury rehabilitation | 20 Hours |
|------------------|--|----------|

CO-PO and PSO Mapping

| CO | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 | PSO4 | PSO5 | PSO6 |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|
| CO1 | 3 | 3 | 1 | 2 | 3 | - | 2 | - | - | - | - | - | - | - |
| CO2 | 3 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | - | - | - | - | - | - |
| CO3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | - | - | - | - | - | - |
| CO4 | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 3 | - | - | - | - | - | - |

Strongcontribution-3, Averagecontribution-2, Lowcontribution-1,

SuggestedReadings:

| | |
|-----------------------|---|
| ReferenceBooks | <ol style="list-style-type: none"> 1. Tidy's physiotherapy 2. Cash's Textbook of Neurology for Physiotherapists 3. Physical Rehabilitation Assessment and Treatment – O'Sullivan Schmitz |
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| ParaText | <ol style="list-style-type: none"> 1. https://youtu.be/qEhoA87Z2_w?si=oYKBZTa7WBvC3K85 2. https://youtu.be/QJfrAzSnejU?si=fMXI-RbO4_wh8Ja 3. https://youtu.be/1PL3bSE8Bkc?si=VEvd6p4eIYDXFIMM 4. https://youtu.be/riXPmXDRz_Y?si=UVKBJpZrNmZUZKL7 5. https://youtu.be/ALbNYfjKWUg?si=gXZKxppo_pHynF4f 6. https://youtu.be/76RwJ0Kzx8Q?si=UQ1VYa4Ven0Z7Us7 7. https://youtu.be/i7GidKRUzrY?si=VcIVRLtxLjBZ-1HU 8. https://youtu.be/Xqv0XKuWoFY?si=d2LcoQwLOdsirZ3K |
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Recapitulation & Examination Pattern

Internal Continuous Assessment:

| Component | Marks | Pattern |
|---|-----------|--|
| Class test | 12 | Contains 01 long question. question carries 04Marks. 02 Short questions. Each question carries 02Marks 04 multiple choice questions. Each question carries 01Marks |
| Class participation or any other | 04 | This to be made on activities and instruction given by subject teacher. |
| Marks Assignments/Project: | 04 | Assignment to be made on topics and instruction given by subject teacher |
| Class Presentation: | 04 | This to be made on topics and instruction given by subject teacher |
| Bed Side behavior or Interaction in Class | 02 | This to be made on activities and instruction given by subject teacher. |
| Attendance | 04 | As per policy |
| Total Marks | 30 | |

| Name of the Program | BPT | | | Year/ Semester: | IV year/VIII sem |
|--|--|-----------------|----------------|-----------------------|------------------|
| Course Name | EVIDENCE BASED PRACTICE | Course Code: | BPT 805 | Type: | Theory |
| Credits | 04 | | | Total Sessions Hours: | 40 Hours |
| Evaluation Spread | Internal Continuous Assessment | 30 Marks | | End Term Exam: | 70 Marks |
| Type of Course | Compulsory | • Core | | Creative | Life Skills |
| Course Objectives | 1. Incorporate evidence based practice into clinical decisions of patient care and Management. | | | | |
| Course Outcomes (CO): After the successful course completion, learners will develop following attributes: | | | | | |
| CO1 | Define evidence based practice & gain confidence in making clinical decisions on diagnosis and treatment. | | | | |
| CO2 | Make complex decision from heuristic decision. | | | | |
| CO3 | Make decisions based on prescriptive, descriptive and artificially added approach & categorize the subjects and objects of knowledge. | | | | |
| CO4 | Differentiate between screening and diagnosis & understand the importance of history taking and physical examination | | | | |
| CO5 | Identify and appreciate ethical principles in physiotherapy. | | | | |
| Pedagogy | Interactive, discussion-bases, student-centered, presentation. | | | | |
| Internal Evaluation Mode | Mid-term Examination: 30 Marks Class test: 12 Marks Class participation or any other : 04 Marks Assignments/Project: 04 Marks Attendance: 04 Marks Class Presentation: 04 Marks Bed Side behavior or Interaction in Class: 02 Marks | | | | |
| Session Details | Topic | | | Hours | Mapped CO |
| UNIT 1 | Evidence based Practice <ol style="list-style-type: none"> Introduction to Evidence Based Practice: Definitions, Evidence Based Practice, Concepts of Evidence based Physiotherapy: Awareness, Consultation, Judgement, and Creativity Development of Evidence based knowledge, The Individual Professional, Professionals within a discipline, and Professionals across disciplines Evidence Based Practitioner: The Reflective Practitioner, The E Model, Using the E Model | | | 15 | CO1 |

| | | | | | | | | | | | | |
|---|--|------------|------------|------------|------------|------------|------------|------------|------------|-------------|-----------|---|
| NIT 2 | <p>Finding the Evidence 10 hours</p> <p>a. Measuring outcomes in Evidence Based Practice, Measuring Health Outcomes, Measuring clinical outcomes, Inferential statistics and Causation Searching for the Evidence: Asking Questions, Identifying different sources of evidence, Electronic Bibliographic databases and World Wide Web, Conducting a literature search. Step by-step search for evidence</p> <p>b. Assessing the Evidence: Evaluating the evidence; Levels of evidence in research using quantitative methods, Levels of evidence classification system, Outcome Measurement, Biostatistics, The critical review of research using qualitative methods Systematically reviewing the evidence: Stages of systematic reviews, Meta-analysis, The Cochrane collaboration</p> <p>c. Economic evaluation of the evidence: Types of economic evaluation, conducting economic evaluation, critically reviewing economic evaluation, locating economic evaluation in the literature.</p> | | | | | | | | | | 15 | CO2 CO5 |
| UNIT 3 | <p>Using the Evidence 10 hours</p> <p>a. Building evidence in practice; Critically Appraised Topics (CATs), CAT format, Using CATs, Drawbacks of CATs Practice guidelines, algorithms, and clinical pathways: Recent trends in health care, Clinical Practice Guidelines (CPG), Algorithms, Clinical pathways, Legal implications in clinical pathways and CPG, Comparison of CPGs, Algorithms and Clinical Pathways</p> <p>b. Communicating evidence to clients, managers and funders: Effectively communicating evidence, Evidence based communication in the face of uncertainty; Evidence based communication opportunities in everyday practice Research dissemination and transfer of knowledge: Models of research transfer, Concrete research transfer strategies, Evidence based policy</p> | | | | | | | | | | 15 | CO5 CO2 CO4 CO3 |
| CO-PO and PSO Mapping | | | | | | | | | | | | |
| CO | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 | | |
| CO1 | 1 | - | 1 | - | - | 1 | - | - | - | - | - | |
| CO2 | 1 | - | 2 | 3 | 1 | 1 | - | - | - | - | 1 | |
| CO3 | 1 | - | 1 | - | - | 1 | - | - | - | - | - | |
| CO4 | 1 | - | 1 | 2 | - | 1 | - | - | - | - | 2 | |
| CO5 | 1 | - | 1 | 2 | 2 | 1 | - | - | - | - | 1 | |
| <i>Strong contribution-3, Average contribution-2, Low contribution-1,</i> | | | | | | | | | | | | |
| Suggested Readings: | | | | | | | | | | | | |
| Text- Books | <ol style="list-style-type: none"> 1. Practical Evidence-Based Physiotherapy, Herbert Robert BAppSc, MAppSc, PhD, Elsevier - Health Sciences Division 2. Handbook of Evidence-Based Practice in Indian Physiotherapy Profession, Naveen Kumar | | | | | | | | | | | |
| Reference Books | <ol style="list-style-type: none"> 1. Practical Evidence-Based Physiotherapy, Churchill Livingstone; 2nd edition | | | | | | | | | | | |
| Para Text | <ul style="list-style-type: none"> • https://www.youtube.com/watch?v=sP4SSwwzH48&list=PLPkuW1Ggsq_OHU5dOBeEdazZIYvTCWtZR • https://www.youtube.com/watch?v=hd6LZRD4Jck | | | | | | | | | | | |

| Recapitulation & Examination Pattern | | |
|---|--------------|---|
| Internal Continuous Assessment: | | |
| Component | Marks | Pattern |
| Mid Semester | 12 | Contains 01 long question. question carries 04 Marks. 02 Short questions. Each question carries 02 Marks 04 multiple choice questions. Each question carries 01 Marks |
| Class Test | 04 | This to be made on activities and instruction given by subject teacher. |
| Class Presentation/Discipline | 04 | Assignment to be made on topics and instruction given by subject teacher |
| Assignment/ Project | 04 | This to be made on topics and instruction given by subject teacher |
| Beside Behavior | 02 | This to be made on activities and instruction given by subject teacher. |
| Attendance | 04 | As per policy |
| Total Marks | 30 | |