

JHARKHAND RAI UNIVERSITY



Bachelor of Physiotherapy (BPT)

SEVENTH SEMESTER SYLLABUS

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DEPARTMENT OF PHYSIOTHERAPY (BPT)

Duration: Four years Six months

Academic Year: 2022 – 2026

Syllabus

COURSE SCHEME

BATCH 2022-2026

BACHELOR OF PHYSIOTHERAPY

CHOICE BASED CREDIT SYSTEM

SEMESTER VII

S.No	CODE	COURSE TITLE	Periods			Evaluation Scheme				Subject Total	Credit
			L	T	P	Assignment	TA	Total	ES E		
1	23A701	REHABILITATION & PHYSIOTHERAPY ETHICS	3	0	0	20	10	30	70	100	3
2	23A702	PHYSIOTHERAPY IN NEUROLOGICAL CONDITIONS - I	4	0	0	20	10	30	70	100	4
3	23A703	PHYSIOTHERAPY IN SPORTS CONDITIONS - I	4	0	0	20	10	30	70	100	4
4	23A704	RESEARCH METHODOLOGY & BIOSTATISTICS	4	0	0	20	10	30	70	100	4
5	40BPT. 401	SEMINAR IN EXECUTIVE COMMUNICATION	2	0	0	20	10	30	70	100	0
PRACTICAL/SESSIONAL											
1	23A702 P	PHYSIOTHERAPY IN NEUROLOGICAL CONDITIONS - I	0	0	4			30	20	50	2
2	23A703 P	PHYSIOTHERAPY IN SPORTS CONDITIONS - I	0	0	4			30	20	50	2
3	23A705 P	PT- CLINICALS - III	0	0	16			30	20	50	8
									TOTAL	650	27

Program: Bachelor of Physiotherapy (BPT)
Semester: Seventh
Course: Rehabilitation & Physiotherapy Ethics
Course Code: 23A701

L	T	P	Credits
3	0	0	3

COURSE LEARNING OBJECTIVE

CLO1: This Subject will help to impart ethical knowledge related to physiotherapy.

CLO2: To learn the broader aspect of Community based rehabilitation.

CLO3: To learn law and management skills related to hospital and clinic.

COURSE OUTCOME

At the end of the course candidate will able to

CO1: Understand the team approach in rehabilitation of disabled people.

CO2: Deliver treatment in community and educate people.

CO3: Work with various national and international organization in rehabilitation.

CO4: Understand the moral values and meaning of ethics.

CO5: Develop psychomotor skills for physiotherapist-patient relationship.

CO6: Develop bed side behavior, respect & maintain patients' confidentiality

UNIT 1: Introduction to Rehabilitation: Introduction of Rehabilitation & History, Epidemiology of disability (Impairment, disability, phases of disability process etc.); principles of Rehabilitation & concept of team approach with rolls of each individual participant; organization of Rehabilitation unit; disability prevention evaluation & principles of Rehabilitation Management; role of Physiotherapy in Rehabilitation (Preventive, treatment & restoration); brief outline of Communication disorder & its implications on Rehabilitation process; brief outline of psychosocial & vocational aspects of Rehabilitation; introduction to Occupational therapy; activities of daily living, functional assessment & training for functional independence.

UNIT 2: Community Based Rehabilitation: Brief outline of basic community medicine with special reference to community based Rehabilitation; infrastructure and role of CBR; assessment of disability in rural & urban setups; Health care delivery system & preventive measures with specific reference to disabling conditions; Community education program; application of Physiotherapy skills at community level with special reference to the need at rural level;

UNIT 3: Role of voluntary Organizations in CBR: Charitable Organizations, Role of Physiotherapy in CBR: Screening for disabilities, Prescribing exercise program, Prescribing and devising low cost locally available assistive aids; Modifications physical and architectural barriers for disabled, Disability prevention, Strategies to improve ADL, Rehabilitation program for various neuro-musculoskeletal and cardiothoracic disabilities.

UNIT 4: Voluntary health agencies – National level and International NGO’s, Multilateral and Bilateral agencies. International Health Organizations: WHO, UNICEF, UNDP, UNFPA, FAO, ILO, World bank, USAID, SIDA, DANIDA, Rockefeller, Ford foundation, CARE, RED CROSS. National District Level Rehabilitation Program: Primary rehabilitation unit, Regional training center, District rehabilitation center, Primary Health center, Village rehabilitation worker, Anganwadi worker.

UNIT 5: Ethics and Law: Concepts of morality, Ethics & Legality-rules of professional conduct & their Medico-legal & moral implications-The need of Council Act for Physiotherapy; Constitution & Functions of the Indian association of Physical therapy; Functioning of the World Confederation of Physical therapy [W.C.P.T.] & its various branches-Special Interest groups [brief Role of W.H.O.& WCPT;

UNIT 6 : Introduction to Evidence Based Practice: Definitions, Evidence Based Physiotherapy Practice; Management studies related to–local health care organization management & structure-planning delivery with quality assurance & funding of service delivery information technology - Time management - career development in Physiotherapy; Administration - principles-based on the Goal & functions - at large hospital set up/domiciliary services/private clinic /academic.

Suggested Readings:

Text Books:

1. S.Sunder,*Textbook of Rehabilitation*,Jaypee.

Reference Books:

1. Sullivan,Schmitz*Physical rehabilitation-assessment & treatment*, F.A Davis.

Note: Latest editions of all the suggested books are recommended.

Program: Bachelor of Physiotherapy (BPT)
Semester: Seventh
Course: Physiotherapy in Neurological Conditions - I
Course Code: 23A702

L	T	P	Credits
4	0	0	4

COURSE LEARNING OBJECTIVE

- CLO1:** The student should be able to identify disabilities due to neurological dysfunction and demonstrations.
- CLO2:** Plan and set treatment goals.
- CLO3:** Apply the skills gained in exercise therapy and electrotherapy in these clinical situations to restore neurological function.

COURSE OUTCOME

At the end of the course candidate will able to

- CO1: Recall neuroanatomy and physiology.
- CO2: Assess neurological conditions.
- CO3: Differentiate upper and lower motor neuron disease.
- CO4: Apply different approaches like Bobath's, Rood's, Vojta, motor relearning, Brunnstorm movement therapy, Sensory integration therapy and reeducate and retrain neurological patient.
- CO5: Treat Spinal cord injury patient.
- CO6: Distinguish different speech disorder.

UNIT 1. Review of basic Neuro – Anatomy and Physiology. Physiotherapy evaluation of a neurological patient, electro diagnostic procedures,

UNIT 2: Interpretations and prognosis in different neurological conditions, Upper and Lower motor neuron lesions.

UNIT 3: Principles of physiotherapy programs, reeducation and retraining techniques in neurological conditions, approaches like: Bobath's / neuro developmental therapy, Rood's approach,

UNIT 4: PNF, Vojta techniques, biofeedback, Brunnstorm movement therapy, Motor Relearning programming, sensory integration therapy. Disturbance of speech and aphasia,

UNIT 5. Spinal cord injury: review of anatomy and physiology, Physiotherapy Assessment of Spinal cord injury.

UNIT 6: Principles of Physiotherapy at various stages of Spinal cord injury Rehabilitation goals and ADL training

Suggested Readings:

Text Book:

1. Cash's Text book for Physio Therapy in Neurological disorders – Jaypee Brothers publication
2. Practical Physical Therapy By Margaret Hollis
3. Therapeutic Exercise By Carolyn Kisner & Colby
4. Physical rehabilitation By Susan. B.O ' Sullivan
5. Tidy's Physiotherapy By Stuart Potter
6. Neurological Rehabilitation By Darcy Umphred
7. " Right in the middle of the stroke " By Patricia Davis

Reference Book:

1. Therapeutic Exercises By Basmajian -5th edition
2. Physical Rehabilitation By Krusen
3. Brain's disorder s of Nervous System

Note: Latest editions of all the suggested books are recommended.

Program: Bachelor of Physiotherapy (BPT)
Semester: Seventh
Course: Physiotherapy in Sports Conditions – 1
Course Code: 23A703

L	T	P	Credits
4	0	0	4

COURSE LEARNING OBJECTIVE

CLO1: The student will be able to conduct a safe and effective treatment of patients with orthopedic and sports conditions.

CLO2: This subject will help students to Pre exercise evaluation.

CLO3: Will help students to identify different sports injuries.

COURSE OUTCOME

At the end of the course candidate will able to

CO1: Do pre exercise assessment like muscle strength, endurance, flexibility, fitness. General guidelines about diet and nutrition.

CO2: Explain the effect of exercise in different system.

CO3: Treat different sports injuries of spine, head neck and lower limb.

UNIT 1: Introduction- Pre-exercise evaluation 2. Diet and nutrition Measurement of fitness components and sports skills –muscular strength, muscular endurance, Measurement of flexibility, Determination exercise endurance.

UNIT 2: Physiological effects of exercise on body systems - Muscular system, Endocrine system, Cardio-respiratory system, Nervous system

UNIT 3: Sports injuries - Spine – PIVD, Kissing spine, cervical whiplash injuries, facet joint

UNIT 4: Sports injuries - Hip – muscle strain, piriformis syndrome, ITB syndrome, osteitis pubis,

UNIT 5: Sports injuries - Knee – menisci, cruciate, collateral, osteochondritis, chondromalacia patellae, biceps femoris tendonitis, swimmers knee, patello-femoral pain syndrome,

UNIT 6: Sports injuries - Leg & ankle – shin splint, achillis tendonitis & rupture, TA bursitis, ankle sprain, plantar fasciitis, turf toe syndrome, Head & face – maxillofacial injuries, helmet compression syndrome.

Suggested Readings:

Text Books:

1. Clinical sport medicine By Peter Brukner and Karim Khan
2. Physical therapy in sport by Journal Elsevier
3. Physical Rehabilitation in injured Athletes by Andrews Harrelson Wilk

Reference Books:

1. Sport and physical therapy – Bernhardt Donna, Churchill Livingstone,
2. Cash, M. Sport and Remedial Massage therapy. London: Edbury, 1996

Note: Latest editions of all the suggested books are recommended.

Program: Bachelor of Physiotherapy (BPT)
Semester: Seventh
Course: Research Methodology & Biostatistics
Course Code: 23A704

L	T	P	Credits
4	0	0	4

COURSE LEARNING OBJECTIVE

- CLO1:** The student will learn about frame a research project using the principles of research methodology and biostatistics.
- CLO2:** The student will learn about research methods.
- CLO3:** Will Gain knowledge about biostatistics.
- CLO4:** Will learn how to conduct research work/ projects.

COURSE OUTCOME

At the end of the course candidate will able to

- CO1: Understand the importance of clinical research practice.
- CO2: Develop the ability to apply the methods while working on a research project Work.
- CO3: Describe the appropriate statistical methods required for a particular research Design.
- CO4: Choose the appropriate research design and develop appropriate research hypothesis for a research project.
- CO5: Develop a appropriate framework for research studies.

UNIT 1- Introduction to research- Importance of research in clinical practice, scientific approach, characteristics, purposes, and limitations. Ethical issues in research, elements of informed consent, and Structure of a research proposal.

UNIT 2- Research Methodology- Research question including literature review. Measurement: Principles of measurement, reliability and validity.

UNIT 3- Research design- Experimental sampling and design, and Descriptive research.

UNIT 4- Introduction to Biostatistics: Meaning, definition, characteristics of statistics. Importance of the study of statistics, Branches of statistics, Statistics and health science, Parameters and Estimates, Variables and their types, Measurement scales.

UNIT 5- Basic principles of graphical representation, Measures of Central Tendency, Probability and Standard Distributions: Meaning of probability of standard distribution, the binominal distribution, the normal distribution, Divergence from normality – skewness, kurtosis.

UNIT 6- Biostatistical tests- Descriptive statistics, Comparison of means, T-tests , Analysis of Variance, Multiple comparisons, Non-parametric statistics, Correlation, Sampling, Testing of Hypotheses , Level of significance, Degrees of freedom.

Suggested Readings:

Text Books:

1. Handbook of Research In Physical Therapy. CE Bork
2. Physical Therapy Research: Principles and Application. E Domholdt

Reference Book:

1. Research Methodology For Physical Therapists. C Hicks

Note: Latest editions of all the suggested books are recommended.

Program: Bachelor of Physiotherapy (BPT)
Semester: Seventh
Course: Seminar in Executive Communication
Course Code: 40BPT.401

L	T	P	Credits
2	0	0	0

COURSE LEARNING OBJECTIVE:

To impart more advanced basic skills through intensive practice, in this unit again the students get opportunities to apply their general awareness and classroom learning to practical situation to achieve the targeted career goal in this increasingly competitive world Some of the career oriented units are Discussion Skills, Interview Skills, Job Search Strategies , Job Correspondence etc. , they need to undergo ,

- CLO1:** An average student acquires basic skills required for a cherished job.
- CLO2:** Their appreciative personality development becomes a value added attribute in their professional sphere.
- CLO3:** The course enhances communication, leadership and teamwork skills; and personal development skills using practical approach and exposure of students to the realities of the world
- CLO4:** To put greater emphasis on development of non-technical skills, such as flexibility, leadership and good communication.

COURSE OUTCOME

- CO1: Understand the importance of effective communication in business Effective Communication in Business.
- CO2: Differentiate between different methods of communication Methods of Communication.
- CO3: Understand the importance of ethical communication Ethics in Business Communication
- CO4: Understand the importance of staying connected with colleagues, other professionals, and customers in the digital age.

(Activity Based)

WORKSHOPS

- Debate
- Extempore
- Group Discussion
- Panel Discussion

- Presentation-Paper & Oral
- Reports: Survey Report, Project Report, Case Study

Suggested Readings:

Books :

- Monippally, Matthukutty. M. 2001. *Business Communication Strategies*. 11th Reprint. Tata McGraw-Hill. New Delhi
- Swets, Paul. W. 1983. *The Art of Talking So That People Will Listen: Getting Through to Family, Friends and Business Associates*. Prentice Hall Press. New York
- Lewis, Norman. 1991. *Word Power Made Easy*. Pocket Books
- Sen , Leena .Communication Skills ; Eastern Economy Edition
- Ghanekar , Dr. Anjali . Essentials of Business Communication Skills ; Everest Publishing House
- David Green . *Contemporary English Grammar, Structure & Composition* ; MacMillan
- Dictionary; Oxford
- Dictionary ; Longman

Program: Bachelor of Physiotherapy (BPT)
Semester: Seventh
Course: Physiotherapy in Neurological Conditions - I
Course Code: 23A702P

L	T	P	Credits
0	0	4	2

COURSE LEARNING OBJECTIVE

CLO1: This subject will help to integrate the knowledge neurology.

CLO2: Learn about the neurosurgery with skills to apply these in clinical situations of dysfunction.

CLO3: Learn how to handle the neurological pathology condition.

COURSE OUTCOME

At the end of the course candidate will able to

CO1: Do neurological assessment including higher mental function

CO2: Perform various clinical test

CO3: Assess neurological conditions

1. Basic approach and general examination of neurological patient
2. Assessment, Clinical examination and tests of the following:
 - Consciousness
 - Memory
 - Speech and language
 - Cranial nerve I-XII
 - Motor system
 - Movement disorders
 - Co-ordination and gait
 - Sensory system
 - Autonomic nervous system
 - Neurovascular system

3. Clinical examination of all neurological problems.

Note: Student must maintain a logbook. The duly completed logbook should be Submitted during practical examination.

Program: Bachelor of Physiotherapy (BPT)
Semester: Seventh
Course: Physiotherapy in Sports Conditions - I
Course Code: 23A703P

L	T	P	Credits
0	0	4	2

COURSE LEARNING OBJECTIVE

- CLO1:** Learn how to take History from patient.
CLO2: Gain knowledge on Assessment.
CLO3: Learn about Clinical diagnosis based on the presentations and investigations.
CLO4: Physiotherapy management of the various disorders & surgeries.

COURSE OUTCOME

At the end of the course candidate will able to

- CO1: Assess sport injury patient
 CO2: Diagnose the condition based upon history and clinical presentation
 CO3: Correlate laboratory reports & clinical findings and treat condition

The students will be shown patients of relevant diseases and disorders for:

1. History taking of the conditions of patients.
2. Assessment.
3. Clinical diagnosis of the presentations.
4. Investigations and tests of different clinical presentations.
5. Physiotherapy management of the various disorders & surgeries.

Note: Student must maintain a logbook. The duly completed logbook should be Submitted during practical examination.

Program: Bachelor of Physiotherapy (BPT)

Semester: Seventh

Course: PT - Clinicals – III

Course Code: 23A705P

L	T	P	Credits
0	0	16	8

COURSE LEARNING OBJECTIVE

CLO1: Students will be posted in rotation in the following areas/wards.

The students will be clinically trained to provide physiotherapy care for the patients under supervision.

CLO2: They will be trained on bed side approach, patient assessment, performing special tests, identifying indications for treatment, ruling out contraindications, decision on treatment parameters, dosage and use relevant outcome measures under supervision.

CLO3: They will be trained on Evidence based practice.

COURSE OUTCOME

At the end of the course candidate will able to

CO1: Provide physiotherapy care.

CO2: Treat patient at bedside.

CO3: Practice evidence based.

1. The students will be posted in different departments in various setups. According to their planned curriculum.

2. Every student will be asked to maintain a separate logbook consisting of minimum thirty case histories.

Practical exam shall be conducted and student will be assessed according to:-

- Bedside case presentations and case discussions
- .Lab sessions consisting of evaluation and assessment methods on student models, treatment techniques and practice sessions.

Note: Student must maintain a logbook. The duly completed logbook should be Submitted during practical examination.