

STUDY & EVALUATION SCHEME OF BACHELOR OF PHYSIOTHERAPY

(BPT - III YEAR/ VI SEMESTER)

**[Applicable w.e.f. Academic Session 2015-16 till
revised]**



**INTEGRAL UNIVERSITY, LUCKNOW
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**Syllabus approved by Board of Study, Faculty Board, Academic
Council, Executive Council of the Integral University, Lucknow**

STUDY & EVALUATION SCHEME

BACHELOR OF PHYSIOTHERAPY (BPT)

(w.e.f. July 2015)

III - Year

VI - Semester

S. No.	Subject Code	Subject Title	Periods per week			Credits	Evaluation Scheme				Subject Total
			L	T	P		Sessional			Exam	
							CT	TA	Total	ESE	
1.	PT 309	Regional Orthopaedics	3	1	0	4	25	15	40	60	100
2.	PT 310	Clinical Neurology & Neurosurgery	3	1	0	4	25	15	40	60	100
3.	PT 311	Physical & Functional Diagnosis	3	1	0	4	25	15	40	60	100
4.	PT 312	Physiotherapy in Medical, Surgical, Obstetrics & Gynecological Condition	3	1	0	4	25	15	40	60	100
5.	PT 313	Physical & Functional Diagnosis -Lab	0	0	2	1	30	30	60	40	100
6.	PT 314	Physiotherapy in Medical, Surgical, Obstetrics & Gynecological Condition - Lab	0	0	2	1	30	30	60	40	100
7.	PT 315	Seminar on clinical Issues	0	2	0	2	25	25	50	00	50
8.	PT 316	Clinical Training	0	0	10	5	25	25	50	00	50
Total			12	06	14	25	210	170	380	320	700

L: Lecture

T: Tutorials

P: Practical

CT: Class Test

TA: Teacher Assessment

ESE: End Semester Examination

Sessional Total: Class Test + Teacher Assessment

Subject Total: Sessional Total + End Semester Examination (ESE)

SUBJECT NAME: REGIONAL ORTHOPAEDICS
SUBJECT CODE: PT 309
(W.e.f. July 2015)

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COURSE OBJECTIVES:

The objective of this course is that after 40 hours of lectures & demonstration, in addition to clinics the student will be able to demonstrate an understanding of orthopaedic conditions causing disability and their management.

In addition the student will be able to fulfill with 75% accuracy (as measured by written, oral & practical internal evaluations) the following objectives of the course.

COURSE OUTLINE

UNIT-I SHOULDER AND ELBOW: 8 Hours

1. Frozen Shoulder and Rotator Cuff Disease
2. Tennis Elbow Golfer Elbow Student Elbow
3. Pulled Elbow Cubitus Varus Cubitus Valgus
4. Pronator Teres Syndrome Radial Tunnel Syndrome.

UNIT-II WRIST AND HAND: 8 Hours

1. Carpal Tunnel Syndrome, Ulnar Tunnel Syndrome
2. Dupuytren's Contracture, Madlunge deformity
3. Dequervain's Disease, Ganglion
4. Trigger finger, Thumb and Mallet finger

UNIT-III KNEE, ANKLE AND FOOT: 8 Hours

1. Knee Osteo Arthritis, Chondromalacia patella, meniscopathy.
2. Genu Varus, Genu Valgus, Genu recurvatum.
3. CTEV, Flat Foot Pes Cavus.
4. Plantar fasciitis, Metatarsalgia, Hallux valgus, Hallux varus.

UNIT-IV HIP AND SPINE: 8 Hours

1. Hip Osteo Arthritis, Perthes' Disease.
2. Coxa Vara, Coxa Valga, CDH.
3. PIVD, Spondylosis, Spondylolesthesis, lumbar canal stenosis.
4. Kyphosis, Scoliosis, Lordosis.

UNIT-V RHEUMATOLOGY AND NERVE INJURY:**8 Hours**

1. Gout, Rheumatoid Arthritis.
2. Ankylosing Spondylitis, Psoriatic Arthritis.
3. Basic of nerve injury, Brachial Plexus injury.
4. Common nerve injury of UL and LL.

RECOMMENDED BOOKS:

1. Textbook of Orthopaedics: Kotwal and Natrajan
2. Essential Orthopaedics: Maheshwari
3. Outline of Fracture: Adams
4. Apley, Systems of Orthopaedics and Fracture
5. Essential Clinical Orthopaedics by John Ebenezer

SUBJECT NAME: CLINICAL NEUROLOGY & NEUROSURGERY
SUBJECT CODE: PT 310
(W.e.f. July 2015)

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COURSE OBJECTIVE:

The objective of this course is that after 40 hours of lectures and demonstrations, in addition to clinics, the students will be able to demonstrate an understanding of neurological condition causing disability and their management.

In addition, the student will be able to fulfill with 75% accuracy (as measures by written, oral and practical, internal evaluation) the following objectives of the course.

Brief discussion about definition, etiology, classification, clinical features, diagnosis, medical & surgical management of following neurological disorders:

UNIT I: AN OVERVIEW OF NEUROANATOMY & PHYSIOLOGY: 8 Hours

1. Review the basic anatomy of the brain and spinal cord.
2. Blood supply of the brain and spinal cord.
3. Pyramidal & extrapyramidal system.
4. Ascending & descending tracts.
5. Spinal nerves, the brachial and lumbar plexuses, and cranial nerves.

UNIT II: CONGENITAL & CHILDHOOD DISORDERS: 8 Hours

1. Cerebral palsy
2. Hydrocephalus
3. Spina Bifida
4. Syringomyelia.
5. Muscular dystrophy

UNIT III: CVA AND INFLAMMATORY & INFECTIOUS CONDITIONS: 8 Hours

1. Stroke
2. Meningitis
3. Encephalitis
4. Brain abscess
5. Poliomyelitis.

UNIT IV: DEGENERATIVE & DEMYLINATING DISEASES (CENTRAL AND PERIPHERAL): **8 Hours**

1. Parkinsons disease
2. Chorea
3. Multiple sclerosis
4. Guillain – Barre Syndrome.
5. Transverse myelitis.

UNIT V: TRAUMATIC NEUROLOGY: **8 Hours**

1. Head injury
2. Spinal cord injury
3. Peripheral nerve injury
4. Cervical and lumbar disc lesions.

RECOMMENDED BOOKS:

1. Neurology and neurosurgery illustrated - Kenneth W Lindsay , Ian Bone
2. Clinical Neuroanatomy - Richard S. Snell
3. Brain and Bannister's Clinical Neurology - Sir Roger Bannister
4. Inderbir Singh's Textbook of Human Neuroanatomy - Pritha S Bhuiyan and Lakshmi Rajgopal
5. Human Anatomy By B D Chaurasia's (volume III)
6. Textbook of Clinical Neurology -Christopher G. Goetz
7. Adams and Victor's Principles Of Neurology - Allan H. Ropper and Martin A. Samuels (R).
8. Brain's Diseases of the Nervous System - Michael Donaghy and McLatchie, Greg Chikwe, Joanna Borley, Neil (R).
9. Physical Rehabilitation - Susan O'sullivan (R).

SUBJECT NAME: PHYSICAL & FUNCTIONAL DIAGNOSIS
SUBJECT CODE: PT 311
(W.e.f. July 2015)

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COURSE OBJECTIVES:

Physical and Functional Diagnosis focuses on the basic assessment skills for physical and Functional diagnosis i.e. Musculoskeletal, Neurological Cardiovascular-Respiratory and Sports in order to study the various impairments and their impact on activity and participation of the individual. Understand the use of appropriate tools or instruments of assessment for diagnosis in various diseases and disorders including musculoskeletal, neurological cardio-vascular pulmonary and sports conditions. Understand the role of diagnosis for physiotherapy practice.

UNIT I: INTRODUCTION OF PHYSICAL AND FUNCTIONAL DIAGNOSIS: 8 Hours

1. Physical Diagnosis and Functional Diagnosis, its importance in clinical practice.
2. Subjective examination & Its Importance in Physiotherapy.
3. Objective examination & Its Importance in Physiotherapy.
 - a. Inspection: Inspection with techniques and clinical reasoning.
 - b. Palpation: Palpation with techniques and clinical reasoning.
4. Auscultation & Its Importance in Physiotherapy.
5. Assessment of Pain & Its Importance in Physiotherapy.

UNIT II: ESSENTIAL ASPECTS FOR FORMULATING DIAGNOSIS: 8 Hours

1. Selective Tissue Tension Test (STTT):
 - a. Clinical aspects of ROM Examination, Joint end feel, capsular pattern and non-capsular pattern.
 - b. Muscles girth & Limb Length Measurement Techniques.
 - c. Sensory & Motor Examination: examination Techniques and clinical reasoning, Dermatomes & Myotomes.
 - d. Muscle Tone: Normal, Hypo and Hypertonic, Reflex: Examination techniques of superficial and deep reflexes.
2. Clinical Implications of Manual Muscle Testing (MMT).
3. Body Angle measurement techniques and its clinical reasoning.

4. Tightness, Contracture and Deformity, Its clinical importance in physiotherapy.
5. Balance & Coordination tests and its clinical reasoning.

UNIT-III: FUNCTIONAL DIAGNOSIS & MEASUREMENT SCALES: 8 Hours

1. Functional Diagnosis measures: Functional Activity Specific Assessment-FIM, ADLs scales, Assessment of health and wellness: SF-36, Health Questionnaires for quality of life.
2. Special Investigations: Basic Principles and application of investigative and imaging techniques in Physiotherapy: X-ray, CT, MRI, USG, PFT, and ECG.

UNIT-IV: PHYSICAL DISABILITY EVALUATION AND DISABILITY DIAGNOSIS:

8 Hours

1. Functional evaluation: ICIDH, ICIDH2 and ICF-brief the concepts of health status impairment; functional limitations; disability and handicap; definition of functional activity and the purposes and components of the functional assessment.
2. Outcome measures for musculoskeletal system examination.
3. Outcome measures for neuromuscular system examination with techniques and clinical reasoning.
4. Outcome measures for cardiopulmonary system examination with techniques and clinical reasoning.
5. Outcome measures for Sports related examination with techniques and clinical reasoning.

UNIT-V: ASSESSMENT OF FITNESS:

8 Hours

1. Anthropometry.
2. Agility Assessment.
3. Evaluation of Aerobic fitness
4. Evaluation of muscular endurance and strength
5. Assessment of Physical fitness: Flexibility, Strength, Endurance, Agility, Speed, reaction time, power, coordination, balance, Exercise Tolerance Testing.

RECOMMENDED BOOKS:

1. Textbook of Physical diagnosis: History and examination by Mark H. Swartz
2. Physical Diagnosis Secrets: Salva Tore Mangione M D.
3. Orthopaedic Physical Assessment, Magee DJ. 5th edition. Saunders
4. Muscles: Testing and Function, with Posture and Pain: 5th edition. Kendall FP; McCreary et al. Lippincott Williams and Wilkins.
5. Practical Exercise Therapy: 3rd edition. Hollis M; Cook PF. Wiley-Blackwell
6. Physical Medicine and Rehabilitation: Susan O Sullivan.
7. Training in the Community for the people with disabilities. Goerdet et al. World Health Organization.
8. Physiotherapy for Respiratory and Cardiac Problems. Adults and Paediatrics. 3rd ed. Pryor JA, Webber BA. London: Churchill Livingstone, 2002.
9. Physical Rehabilitation. Assessment and Treatment: 5th Edition. Sullivan SO; Schmitz TJ. F.A. Davis Company.
10. Daniels and Worthingham's Muscle Testing: Techniques of Manual Examination. 8th edition. Hislop H; Montgomery J. Saunders Publication.
11. Therapeutic Exercise: 6th edition. Carolyn K; Kolby. Jaypee Brothers Medical Publishers.

**SUBJECT NAME: PHYSIOTHERAPY IN MEDICAL, SURGICAL,
OBSTETRICS & GYNAECOLOGICAL CONDITION**
SUBJECT CODE: PT 312
(W.e.f. July 2015)

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COURSE OBJECTIVES:

The objective of this course is that after 40 hours of lectures and demonstrations, in addition to clinics, the students will be able to demonstrate an understanding of general medical, general surgical, obstetrics & gynecological conditions.

This course involves a description of the assessment and treatment of patients with general medical, general surgical, obstetrics & gynecological conditions. The student will be able to conduct a safe and effective treatment of patients with general medical, general surgical, obstetrics & gynecological conditions

COURSE OUTLINE

UNIT-I PHYSIOTHERAPY IN MEDICAL CONDITION:

8 Hours

Review of the pathological changes and principles of management by Physiotherapy in the following conditions:

1. Inflammation-acute, chronic and suppurative.
2. Edema – Traumatic, obstructive, paralytic, edema due to poor muscle and laxity.
3. Diabetes Mellitus & Its Physiotherapy Managements.
4. Obesity & Its Physiotherapy Managements.
5. Common condition of Skin – Acne, Psoriasis, Alopecia, Leucoderma, Leprosy.

UNIT-II PHYSIOTHERAPY IN SURGICAL CONDITION:

8 Hours

Review of the pathological changes and principles of pre and postoperative management by Physiotherapy of the following conditions:

1. Common abdominal and transplant surgeries, including, liver, kidney, bladder, bone marrow.
2. Common reconstructive surgical procedures for the management of wounds, ulcers, Burns and consequent contractures and deformities.

UNIT-III PHYSIOTHERAPY IN ONCOLOGY:**8 Hours**

1. Overview of oncology, staging and grading.
2. Common oncological condition of musculoskeletal & their Principles of Management.
3. Common oncological condition of different system-breast, Liver and Brain, Principles of Management.

UNIT-IV CLINICAL OBSTETRICS AND GYNECOLOGY CONDITIONS:**8 Hours**

1. Anatomy and Physiology of Female reproductive system.
2. Principles of clinical examination, investigation diagnosis and prognosis in female reproductive system disorders.
3. Events of 1st IInd & III rd Stages of labour
4. Pre, Peri & Post Menopause - Physiology, Complications & management.
5. Surgical considerations in Obstetrics and Gynecology.

UNIT-V PHYSIOTHERAPY IN OBS AND GYNECOLOGICAL CONDITION:**8 Hours**

1. Overview of pregnancy.
2. Pelvic inflammatory Diseases, Prolapse Uterus, Incontinence, Diastasis recti, Low back and pelvic pain, varicose veins, pelvic floor dysfunction, compression syndrome.
3. Exercise during pregnancy (Ante natal and post natal Physiotherapy management) and post partum.
4. Effects of aerobic exercise during pregnancy, Maternity Blues.

RECOMMENDED BOOKS:

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.

SUBJECT NAME: PHYSICAL & FUNCTIONAL DIAGNOSIS LAB
SUBJECT CODE: PT 313
(W.e.f. July 2015)

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Students will be able to perform:

1. Methods of evaluation, assessment.
2. Students will be able to do Interpretation of common investigations used for functional diagnosis.
3. Students will be able to understand and perform various aspects of Subjective & Objective assessment & documentation-VAS, Mc Gill's modified questionnaire, Numerical Rating Scale.
4. Student will be able to assess various aspects related to higher functions, Cranial nerves examination, Sensations & sensory organization.
5. Student will be able assess and measure Joint mobility, Muscle Strength and associated pathological conditions.
6. Students will be able to assess Tone, Reflexes-Superficial & Deep.
7. Students will be able to perform tests for assessing Co-ordination, Balance, and Endurance.
8. Students will be able to measure Limb Length measurement
9. Students will be able to perform and assess measurement by various Scales-Bergs Balance, Ashworth & Glasgow Coma.
10. Case presentation with Functional diagnosis. Two cases each in
 - a. Musculoskeletal.
 - b. Neurological.
 - c. Cardiovascular & Pulmonary.

**SUBJECT NAME: PHYSIOTHERAPY IN MEDICAL, SURGICAL,
OBSTETRICS & GYNECOLOGICAL CONDITION LAB
SUBJECT CODE: PT 314
(W.e.f. July 2015)**

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Students will be able learn and understand the assessment and management procedures in the following:

1. Physiotherapy assessment in obstetrics:
 - a. Antenatal assessment.
 - b. Assessment during labour.
 - c. Postnatal assessment.
 - d. Common musculoskeletal problem.
 - i. Diastasis recti.
 - ii. Pelvic floor muscle function.
 - iii. Bowel & bladder dysfunction.
2. Gynecology: Physiotherapy assessment in gynecology:
 - a. Physiotherapy Assessment of different gynecological condition.
 - b. Pre & Post operative assessment of gynecological surgery.
 - c. Physiotherapy assessment of Bladder and Bowel Dysfunction.
 - d. Pelvic floor muscle assessment.
 - e. Assessment of pain.
 - f. Diagnostic tools used in gynecological assessment.
 - g. Examination of breast.
 - h. Relaxation techniques.
3. Post Onco surgical Lymphoedema management, management of cancer related fatigue, Rehabilitation of post surgical complication.

RECOMMENDED BOOKS:

1. Therapeutic Exercise by Carolyn Kisner.
2. Physiotherapy in Gynaecological & Obstetrical Conditions-Poldon.
3. Dutta, Text book of Gynecology, New Central Book Agency.
4. Essential of Obstetrics and Gynecology, Hacker Moore Gambone.

SUBJECT NAME: SEMINARS ON CLINICAL ISSUES
SUBJECT CODE: PT 315
(w.e.f. July 2015)

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These will serve as a platform for students to integrate various components of patient management and debate contentious issues in the efficacy of Physiotherapy techniques used in musculoskeletal, neurological, cardiopulmonary, & Sports rehabilitation. Students will present on topics provided to them.

CHECK LIST FOR EVALUATION OF SEMINAR PRESENTATIONS

Name of the students:

Date:

Topic:

Marks: 50

S.No	Item for observation during presentation	Poor (0)	Below Average (1)	Average (2)	Good (3)	Very Good (4)	Excellent (5)
1.	Introduction						
2.	Review of Literature						
3.	Recent Development						
4.	Clarity of presentation						
5.	Understanding of subject						
6.	Ability to answer the questions						
7.	Time management						
8.	Appropriate use of audio/ visual aids						
9.	Overall performance						
10.	Any other observations						
	TOTAL						

Comments:

Name & signature of the faculty/observer:

HoD,
Department of Physiotherapy

SUBJECT NAME: CLINICAL TRAINING
SUBJECT CODE: PT 316
(w.e.f. July 2015)

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Students will engage in clinical practice in Physiotherapy departments in the musculoskeletal, neurology, cardiopulmonary, sports settings to enhance their clinical skills and apply contemporary knowledge gained during teaching sessions.

CHECKLIST FOR EVALUATION OF CLINICAL TRAINING

Name of Student:
Name of Faculty/ Supervisor:
Marks: 50

Month:
Date:

S. No	Point to be Considered	Poor (0)	Below Average (1)	Average (2)	Good (3)	Very Good (4)	Excellent (5)
1.	Punctuality						
2.	Interaction with colleagues and supporting staff						
3.	Maintenance of case records						
4.	Presentation of case during rounds						
5.	Investigation work up						
6.	Bedside Manners						
7.	Rapport with patients						
8.	Treatment approach & technique						
9.	Discipline						
10.	Overall quality of clinical work						
	TOTAL SCORE						

Comments:

Signature of Faculty/ Supervisor

HoD,
Department of Physiotherapy